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Volume VI - Distortion Analysis Plots

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F-15 Inlet/Engine Test Techniques and Distortion Methodologies Studies

Volume VI - Distortion Analysis Plots

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FOREWORD

This report was prepared by the McDonnell Aircraft Company (MCAIR), a division of the McDonnell Douglas Corporation, St. Louis, Missouri for the National Aeronautics and Space Administration, Dryden Flight Research Center, Edwards, California. The study was performed under NASA Contract NAS4-2364, "F-15 Inlet/Engine Test Techniques and Distortion Methodologies Study." The work was performed from March 1977 through February 1978 with Mr. Jack Nugent (NASA/Dryden) as Program Monitor and Mr. Harvey Neumann (NASA/Lewis) as Technical Monitor. Special acknowledgement is due Mr. T. Putnam (NASA/Dryden) for his constructive criticisms and suggestions.

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This report consists of nine volumes. Technical discussions of the program, results and Appendices A and B are presented in Volume I (NASA CR 144866). Appendices C through J are presented in Volume II through IX (NASA CR 144867-144874) which present the distortion analysis plots and the associated statistical functions used for the analyses.

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SYMBOLS

	<u>Description</u>	<u>Units</u>
ALPHA	Aircraft angle of attack	degrees
ALT	Altitude	meters (feet)
AVG	Average	
b, B	Radial Distortion Weighting factor	
BYPASS	Inlet bypass area.	sq. meters (sq. inches)
Beta	Aircraft angle of sideslip	degrees
CIVV	Compressor Inlet (Fan) Variable Vanes . . .	degrees
Deg	Degree	degree
ΔP_{t_2}	Fluctuating component of individual probe pressure at the engine face	
$(\Delta P_{t_2})_{rms}$	Root mean square of fluctuating pressure . .	kPa (PSIA)
DELTA3	Inlet third ramp angle relative to the Inlet Reference Line	degrees
$\Delta P_{t_{2.5H}}$	Fluctuating component of fan exit total pressure/engine stream	kPa (PSIA)
$\Delta P_{t_{2.5C}}$	Fluctuating component of fan exit total pressure/fan stream	kPa (PSIA)
$\frac{\Delta P}{P}, D_2$	Spatial Distortion = $[(P_{t_2})_{max} - (P_{t_2})_{min}] / \bar{P}_{t_2}$	
FLT, FLIGHT	Flight test data notation	
FSCP	Full Scale Cold Pipe (without engine) wind tunnel test data notation	
FSE	Full Scale with Engine wind tunnel test data notation	
HZ	Hertz.	hertz
I.D., IDENT	Identification	
$K_{a_2}, KA2$	Fan distortion descriptor = $K_\theta + b K_{ra_2}$. .	
$K_\theta, KTHETA$	Circumferential distortion	
$K_{ra_2}, KRA2$	Radial distortion.	

SYMBOLS (Continued)

	<u>Description</u>	<u>Units</u>
BKRA2	Radial distortion multiplied by radial distortion weighting factor.	
KC2	High compressor distortion descriptor. . . .	
K0SP	Circumferential distortion descriptor used to calculate the high compressor distortion descriptor.	
kPa	Pressure, Killopascals	Killopascals
M_o	Freestream Mach number	
MACH	Freestream Mach number	
MAX	Maximum.	
MIN	Minimum.	
No.	Number	
P_{t2}	Individual probe engine face steady state pressure	kPa (PSIA)
\overline{P}_{t2}	48 probe averaged engine face steady state pressure	kPa (PSIA)
\overline{P}_{t25H}	Average high compressor face steady state pressure	kPa (PSIA)
P_{t_o}	Freestream total pressure.	kPa (PSIA)
PT2I	Individual probe time variant engine face pressure	kPa (PSIA)
$\overline{PT2I}$, \overline{PI}	48 probe averaged time variant engine face pressure	kPa (PSIA)
PI/PS	Ratio of time variant to steady state 48 probe averaged engine face pressure . . .	
PSIA	Pressure (Pounds per Square Inch Absolute) .	PSIA
Q, q	Dynamic pressure	kPa (PSIA)
Re. No.	Reynolds number	
RHO	Inlet first ramp angle relative to the Inlet Reference Line	degrees
RMS, rms	Root mean square.	
Sec	Second	second

SYMBOLS (Continued)

	<u>Description</u>	<u>Units</u>
Series VII	1/6th scale inlet wind tunnel test series data notation.	
Series VIII	1/6th scale inlet wind tunnel test series data notation	
T_{t2}	Engine face total temperature	°K
T_{t25H}	High compressor inlet (or fan exit) total temperature.	°K
T_u	Turbulence	
W_2	Engine/Fan airflow	kg/sec (LB/sec)
WAT_2	Corrected fan airflow = $W_2 \sqrt{\theta_{t2}} / \delta_{t2}$	kg/sec (LB/sec)
WAT_2 Design	Design corrected fan airflow	98.43 kg/sec (217 LB/sec)
WAT_2 Percent	WAT_2 divided by WAT_2 Design x 100	
W_{25H}	High compressor airflow	kg/sec (LB/sec)
WAT_{25H}	Corrected high compressor airflow $W_{25H} \sqrt{\theta_{t25H}} / \delta_{t25H}$	kg/sec (LB/sec)
WAT_{25H} Design	Design corrected high compressor airflow	24.69 kg/sec (54.44 LB/sec)
WAT_{25H} Percent	WAT_{25H} divided by WAT_{25H} Design x 100.	
α	Aircraft angle of attack	degrees
β	Aircraft angle of sideslip	degrees
Δ_3	Inlet third ramp angle relative to the Inlet Reference Line	degrees
δ_{t2}	Corrected average engine face total pressure $\bar{P}_{t2}/101$	
δ_{t25H}	Corrected average engine face total pressure $\bar{P}_{t25H}/101$	
ρ	Inlet first ramp angle relative to the Inlet Reference Line	degrees
σ	Standard deviation of the instantaneous pressure	kPa (PSIA)

SYMBOLS (Concluded)

	<u>Description</u>	<u>Units</u>
$\sigma_{xy}(\tau)$	Covariance of pressure data from probes x and y at lag time τ	kPa (PSIA)
$\sigma_{xy}(\tau=0)$	Covariance of pressure data from probes x and y at lag time $\tau=0$	kPa (PSIA)
θ_{t_2}	Corrected average engine face total temperature $T_{t_2}/288.15$	
$\theta_{t_{25H}}$	Corrected average high compressor face total temperature $T_{t_{25H}}/288.15$	

SUMMARY

Recent emphasis on increased maneuverability requirements for fighter aircraft has necessitated an extensive engineering development effort be directed towards inlet/engine compatibility. Inlet/engine compatibility must be assessed early in the aircraft development program to allow necessary inlet and engine design modifications to be defined and implemented at minimum cost impact. This early assessment of inlet/engine compatibility is determined by engine stability audits computed using inlet distortion levels from subscale inlet model data and engine sensitivities to inlet distortion. Therefore, the accuracy with which subscale inlet model distortion levels predict flight test vehicle distortion levels is a crucial element in assessing inlet/engine compatibility.

The primary goal of this distortion methodologies study was to determine if time variant distortion data taken from a subscale inlet model can predict peak distortion levels for a full scale flight test vehicle. The data base used to accomplish this goal was collected in separate programs by MCAIR and NASA/Dryden. Subscale and full scale wind tunnel data were collected by MCAIR during the F-15 development program, and flight test data were collected by NASA/Dryden during the NASA F-15 inlet/engine compatibility flight test program. This data base has a Mach number range of 0.4 to 2.5 and an angle of attack range from -10 degrees to +12 degrees.

The primary objectives accomplished in meeting the overall program goal were to determine the effects on peak distortion of: (1) Reynolds Number/scale, (2) engine presence and (3) frequency content. In addition, the capability of the P&WA stability audit system to predict engine stalls was evaluated, and the capability of Melick's procedure, Reference (1), to predict peak time variant distortion levels was evaluated. Using the Pratt and Whitney Aircraft distortion descriptor, K_{a2} , the data indicate the following significant results for the F-15/F100 inlet/engine propulsion system.

- o Peak time variant distortion from subscale inlet model wind tunnel tests are representative of full scale flight test distortion.
- o The time variant pressure data of this study are random stationary data, thereby allowing valid statistical analyses to be conducted.
- o The effect of the engine presence on total pressure recovery, peak time variant distortion and turbulence level is small but favorable.
- o The Reynolds number/scale evaluation indicates a general trend of increasing total pressure recovery, decreasing peak time variant fan distortion and decreasing turbulence with increasing Reynolds number/scale.
- o The frequency content evaluation indicates that peak time variant fan distortion and turbulence increase with increasing filter cutoff frequency for all of the data evaluated in this study.
- o The capability of the Pratt & Whitney Aircraft stability audit system to predict engine stalls has been verified for both stall and non-stall flight test conditions.

- o Predictions of peak distortion values using Melick's procedure are accurate to 11.3 percent average error for fourteen data points having nominal turbulence levels and are accurate to 20 percent average error (the maximum error approaches 40 percent) for eight data points having high turbulence levels.

APPENDIX G

DISTORTION ANALYSIS PLOTS

Presented herein are the data used in the F-15 Inlet/Engine Test Techniques and Distortion Methodologies Study. The figure numbers of this appendix correspond to the Data Point Identification Numbers in the data matrix of Table G-1. The data presented in each figure for each identification number is listed below:

- Inlet Total Pressure Recovery vs Inlet Mass Flow Ratio
- Inlet Total Pressure Recovery vs Percent Corrected Airflow
- Turbulence vs Percent Corrected Airflow
- Steady State Fan Distortion vs Percent Corrected Airflow
- *Instantaneous Fan Distortion vs Percent Corrected Airflow
- Steady State Circumferential Distortion vs Steady State Radial Distortion
- Instantaneous Circumferential Distortion vs Instantaneous Radial Distortion
- Steady State Spatial Distortion vs Percent Corrected Airflow
- Instantaneous Spatial Distortion^{**} vs Percent Corrected Airflow
- Steady State Total Pressure Contour
- Turbulence Contour
- Time History Plots of Fan Distortion and Average Instantaneous Engine Force Pressure
- Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}

* INSTANTANEOUS and PEAK TIME VARIANT are equivalent when referring to fan distortion.

** At peak fan distortion.

DATA POINT I.D. NO.	MODEL SCALE	M ₀	α (DEG)	β (DEG)	ρ (DEG)	$\Delta 3$ (DEG)	BYPASS*	% WAT2	RE NO. $\times 10^{-6}$	ANALYSIS TIME (SEC)	PART-POINT **
1	FLT	0.4	16.4	-0.8	6.9	27.6	C	104.1	1.44	0.6	422-4
2	FLT	0.59	13.9	0.9	7.0	26.6	C	102.7	2.04	0.6	417-5
3	↓	0.52	10.0	0.7	↓	27.6	↓	107.1	1.33	0.6	417-4
4	↓	0.69	11.5	1.0	↓	26.5	↓	104.2	0.84	0.6	417-2
5	1/6th	0.60	-10.0	10.0	-3.0	10.6	C	97.2	0.43	0.144	164-1
6	1/6th	0.60	-10.0	10.0	-3.0	10.6	C	90.2	0.43	0.144	164-3
7	FLT	0.69	-8.4	10.6	0.6	10.5	C	101.2	1.40	0.88	421-10
8	1/6th	0.60	4.0	0	7.0	10.6	C	76.6	0.43	0.181	112-7
9	1/6th	0.60	4.0	0	7.0	10.6	C	108.6	0.43	0.181	112-5
10	FSE	0.60	4.0	0	5.2	10.0	C	97.7	3.41	1.110	116-2
11	FLT	0.67	4.3	0.7	6.9	11.1	C	94.4	3.58	0.72	424-2
12	↓	0.69	3.4	0.7	6.9	11.1	↓	74.1	3.68	0.76	425-6
13	↓	0.59	4.6	1.2	7.0	11.1	↓	107.9	1.74	0.62	412-2
14	↓	0.60	4.6	0.6	6.9	11.0	↓	76.2	1.66	1.11	424-11
15	FLT	0.85	8.8	-0.5	7.0	27.6	C	104.2	2.21	0.60	417-3
16	FLT	0.92	5.6	0.6	7.0	26.6	C	104.5	1.04	0.60	417-1
17	1/6th	0.90	-10.0	10.0	-3.0	10.6	C	70.2	0.34	0.113	157-7
18	1/6th	0.90	-10.0	10.0	-3.0	10.6	C	106.3	0.34	0.113	157-5
19	FLT	0.94	-8.9	10.2	1.0	10.5	C	107.1	1.6	0.69	421-14
20	FSE	0.90	-4.0	0	-1.0	8.2	C	97.8	3.64	1.990	102-2
21	FLT	0.90	-2.8	-0.2	-1.2	8.7	C	97.5	3.25	1.23	424-10
22	FLT	0.93	-3.3	0	-1.2	8.6	C	104.8	1.17	1.99	425-3
23	1/6th	0.90	4.0	0	7.0	10.6	C	76.8	0.34	0.369	67-9
24	1/6th	0.90	4.0	0	7.0	10.6	C	104.3	0.34	0.369	67-7
25	FSE	0.90	4.0	0	7.3	10.4	C	97.7	3.62	2.260	126-2
26	FLT	0.92	4.6	0.7	6.0	11.0	C	96.2	3.47	0.89	420-9
27	↓	0.91	5.2	0.5	6.9	11.1	↓	99.1	3.28	1.18	422-2
28	↓	0.92	4.2	0.1	7.0	11.0	↓	76.1	2.47	1.34	421-5
29	↓	0.90	4.1	0.5	6.9	11.1	↓	98.6	2.43	1.46	424-9
30	↓	0.90	5.1	0.1	7.0	11.0	↓	105.7	2.42	0.69	421-4
31	↓	0.90	3.5	0.2	7.0	11.0	↓	77.5	1.78	2.26	421-6
32	↓	0.90	5.2	-0.1	7.0	11.0	↓	100.1	1.79	0.70	421-7
33	↓	0.94	4.3	0.2	7.0	11.1	↓	105.6	1.89	1.06	421-8

*C = Closed

** For flight test, these data are flight-run numbers

GP78-0323-8

TABLE G-1
DATA MATRIX

DATA POINT I.D. NO.	MODEL SCALE	M ₀	α (DEG)	β (DEG)	ρ (DEG)	$\Delta 3$ (DEG)	BYPASS*	% WAT2	RE NO. $\times 10^{-6}$	ANALYSIS TIME (SEC)	PART-POINT**
34	FLT	1.21	1.5	0	6.0	27.6	C	98.3	2.97	0.60	423-4
35	FLT	1.24	3.0	0.8	6.7	27.6	C	96.4	1.52	0.60	423-3
36	1/6th	1.2	10.0	0	7.0	10.6	C	76.6	0.45	0.198	131-7
37	1/6th	1.2	10.0	0	7.0	10.6	C	107.9	0.45	0.198	131-5
38	FLT	1.18	7.7	0.3	7.0	11.0	C	74.0	3.22	1.21	424-12
39	↓	1.2	7.4	-0.1	7.1	11.1	↓	94.4	3.35	1.19	424-13
40	↓	1.17	10.6	0.0	7.0	11.0	↓	103.4	1.40	0.60	421-17
41	FLT	1.54	1.5	0	-1.4	27.0	Auto	95.4	2.17	0.60	424-6
42	1/6th	1.6	-4.0	0	-2.0	13.5	C	87.3	0.21	0.106	206-9
43	1/6th	1.6	-4.0	0	-2.0	13.5	C	96.9	0.21	0.106	206-5
44	FLT	1.57	-3.6	0.7	-2.3	13.7	C	89.3	1.46	0.65	414-2
45	1/6th	1.8	-2.0	0	-3.0	17.4	C	80.5	0.22	0.210	15-9
46	1/6th	1.8	-2.0	0	-3.0	17.4	C	91.0	0.22	0.201	15-5
47	FLT	1.75	-2.6	0.4	-2.2	16.7	C	80.7	1.41	1.23	415-1
48	FSCP	1.8	-2.0	0	-3.0	18.7	C	75.1	1.45	0.680	353-15
49	↓	↓	-2.0	↓	-3.0	↓	↓	82.2	1.45	0.680	353-5
50	↓	↓	-2.0	↓	-3.0	↓	↓	85.4	1.44	0.680	353-12
51	FSE	1.8	-2.0	0	-2.9	18.6	C	80.6	1.46	0.680	523-2
52	FSE	1.8	-2.0	0	-2.9	18.6	C	79.8	1.46	0.680	525-4
53	FLT	1.81	-2.3	0.2	-2.9	18.2	C	78.9	1.53	0.680	416-1
54	FSCP	1.8	4.0	0	2.5	18.7	C	79.9	1.45	2.800	355-8
55	FSE	1.8	4.0	0	2.5	18.7	C	80.8	1.46	2.800	528-2
56	FSE	1.8	4.0	0	2.5	18.7	C	79.7	1.46	2.800	529-4
57	FLT	2.0	2.5	0.2	2.3	20.9	Auto	77.0	1.72	2.800	425-2

GP78-0323-9

* C = Closed

** For flight test, these data are flight-run numbers

TABLE G-1 (Continued)
DATA MATRIX

DATA POINT I.D. NO.	MODEL SCALE	M ₀	α (DEG)	β (DEG)	ρ (DEG)	$\Delta 3$ (DEG)	BYPASS*	% WAT2	RE NO. x 10 ⁻⁶	ANALYSIS TIME (SEC)	PART-POINT **
58	1/6th	2.2	-2.0	0	-4.0	22.5	C	68.6	0.22	0.100	250-7
59	FSCP	2.2	-2.0	0	-4.0	22.5	C	69.2	1.48	0.600	411-6
60	1/6th	2.2	-2.0	0	-4.0	25.0	O	65.0	0.22	0.100	249-5
61	1/6th	2.2	-2.0	0	-4.0	25.0	O	52.9	0.22	0.100	249-9
62	FSCP	2.2	-2.0	0	-4.0	25.0	O	61.7	1.48	0.600	385-5
63	FSCP	2.2	-2.0	0	-4.0	25.0	O	62.3	1.48	0.600	385-2
64	FSE	2.2	-2.0	0	-4.0	24.8	P	60.2	1.27	0.600	542-2
65	FSE	2.2	-2.0	0	-4.0	24.8	P	60.5	1.27	0.600	543-4
66	1/6th	2.2	0	0	-2.0	22.5	C	69.3	0.22	0.106	184-7
67	1/6th	2.2	0	0	-2.0	22.5	C	75.4	0.22	0.106	184-5
68	FSCP	2.2	0	0	-2.0	22.5	C	73.6	1.47	0.650	413-9
69	FSCP	2.2	0	0	-2.0	22.5	C	68.3	1.47	0.650	413-12
70	FLT	2.2	0.1	0.2	-2.2	22.9	C	73.0	2.34	0.650	425-1
71	FSCP	2.2	4.0	0	0.0	25.0	O	60.7	1.48	0.600	382-3
72	FSE	2.2	4.0	0	1.0	25.0	O	59.2	1.28	0.600	545-2
73	FSE	2.2	4.0	0	1.0	25.0	O	58.2	1.27	0.600	546-4
74	1/6th	2.2	12.0	0	6.0	25.0	O	47.3	0.22	0.100	252-9
75	1/6th	2.2	12.0	0	6.0	25.0	O	65.0	0.22	0.100	252-5
76	FSCP	2.2	12.0	0	6.8	25.0	O	60.8	1.48	0.600	384-2
77	FSE	2.2	11.0	0	6.8	24.8	O	59.0	1.28	0.600	548-3
78	FSE	2.2	11.0	0	6.8	24.8	P	59.8	1.27	0.600	549-8
79	1/6th	2.5	0	0	-4.0	26.0	O	63.1	0.21	0.100	227-7
80	1/6th	2.5	0	0	-4.0	26.0	O	68.2	0.21	0.100	227-5
81	FSCP	2.5	0	0	-4.0	26.0	O	62.8	1.28	0.600	465-8
82	FSCP	2.5	0	0	-4.0	26.0	O	68.9	1.28	0.600	465-5

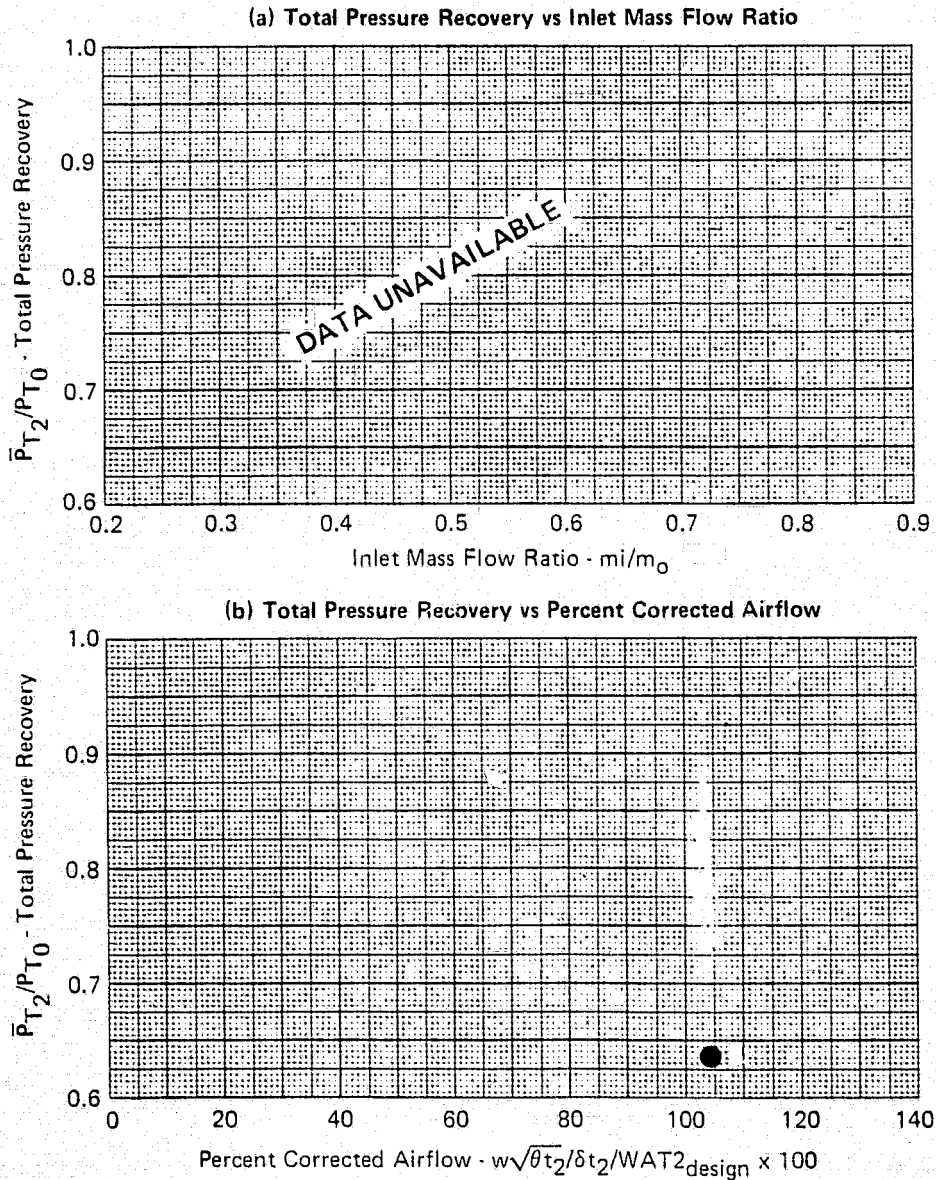
*O = Open, C = Closed, P = Partial

GP78-0323-10

**For flight test, these data are flight-run numbers

TABLE G-1 (Concluded)
DATA MATRIX

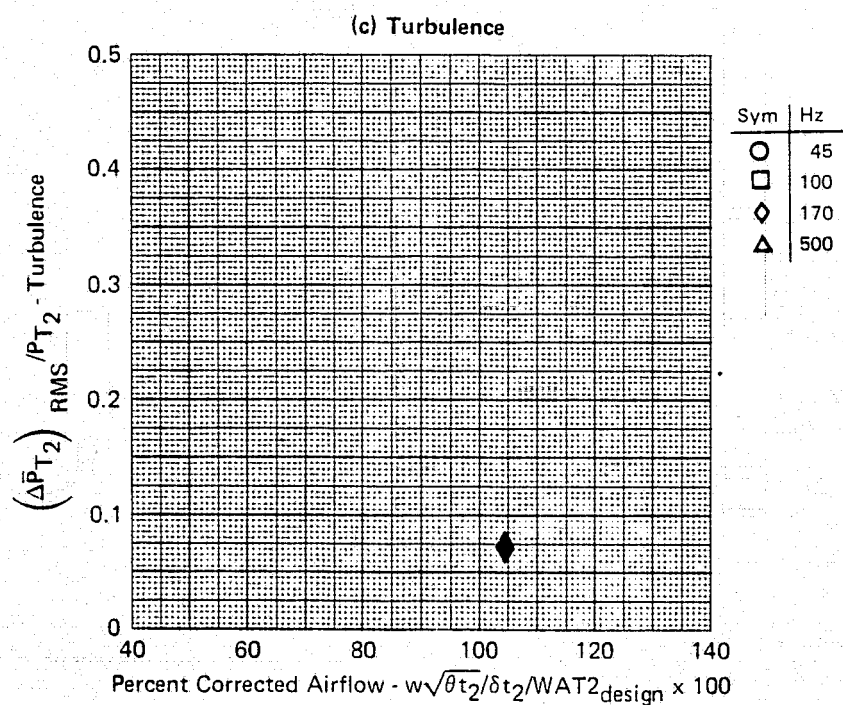
FLIGHT - NASA Data Study
 Part/Point - 422/4, Ident 1
 RHO DELTA3 BYPASS CIVV
 6.9 27.6 0.0 -5.00



GP77-0658-1

FIGURE G-1
INLET DISTORTION ANALYSIS PLOTS
 $M_o = 0.4$ $\alpha = 16.4$ $\beta = -0.8$ $WAT2 = 104.1\%$

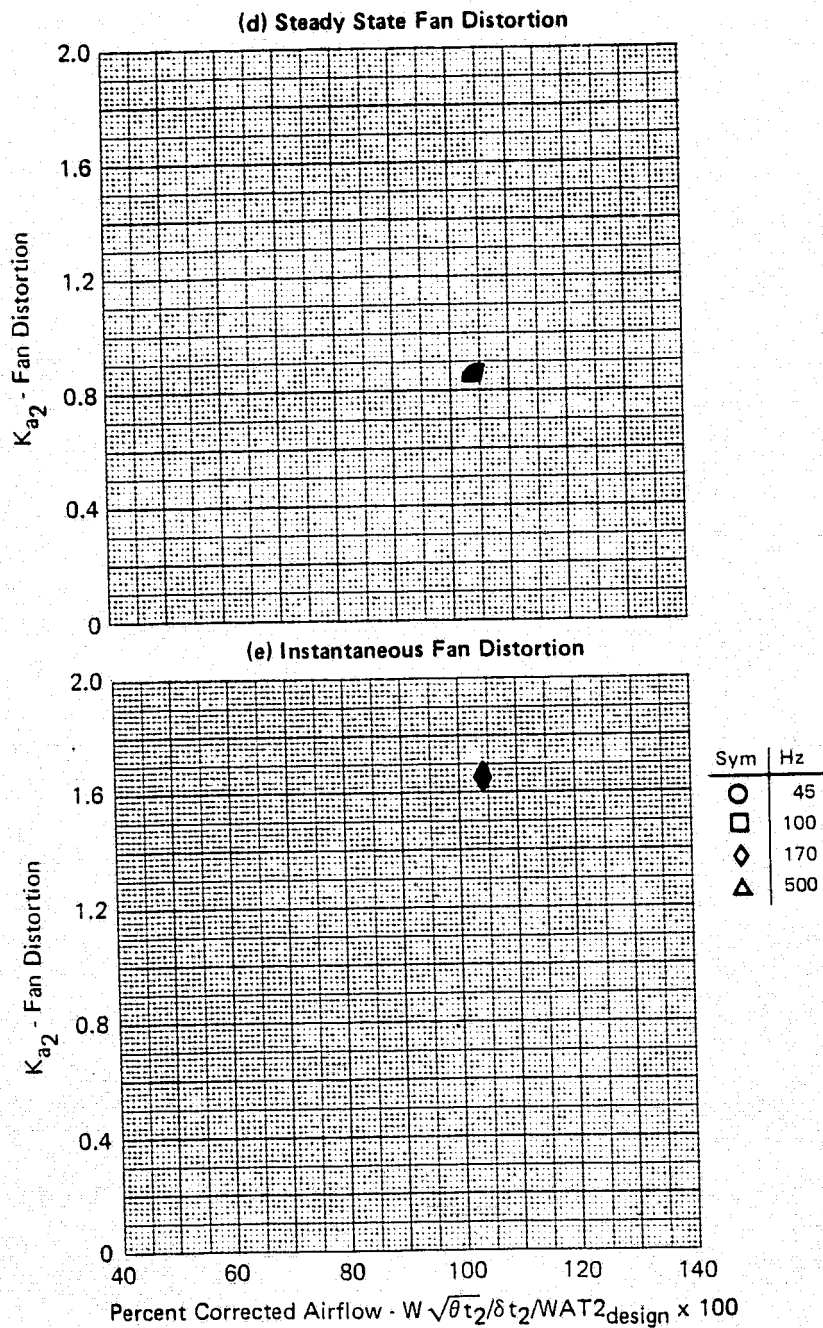
FLIGHT - NASA Data Study
 Part/Point - 422/4, Ident 1
 RHO DELTA3 BYPASS CIVV
 6.9 27.6 0.0 -5.00



GP77-0658-5

FIGURE G-1 (Continued)
INLET DISTORTION ANALYSIS PLOTS
 $M_0 = 0.4$ $\alpha = 16.4$ $\beta = -0.8$ $WAT2 = 104.1\%$

FLIGHT - NASA Data Study
 Part/Point - 422/4, Ident 1
 RHO DELTA3 BYPASS CIVV
 6.9 27.6 0.0 -5.00



GP77-0658-3

FIGURE G-1 (Continued)
INLET DISTORTION ANALYSIS PLOTS
 $M_0 = 0.4$ $\alpha = 16.4$ $\beta = -0.8$ $WAT2 = 104.1\%$

FLIGHT - NASA Data Study
 Part/Point - 422/4 Ident 1
 RHO DELTA3 BYPASS CIVV
 6.9 27.6 0.0 -5.00

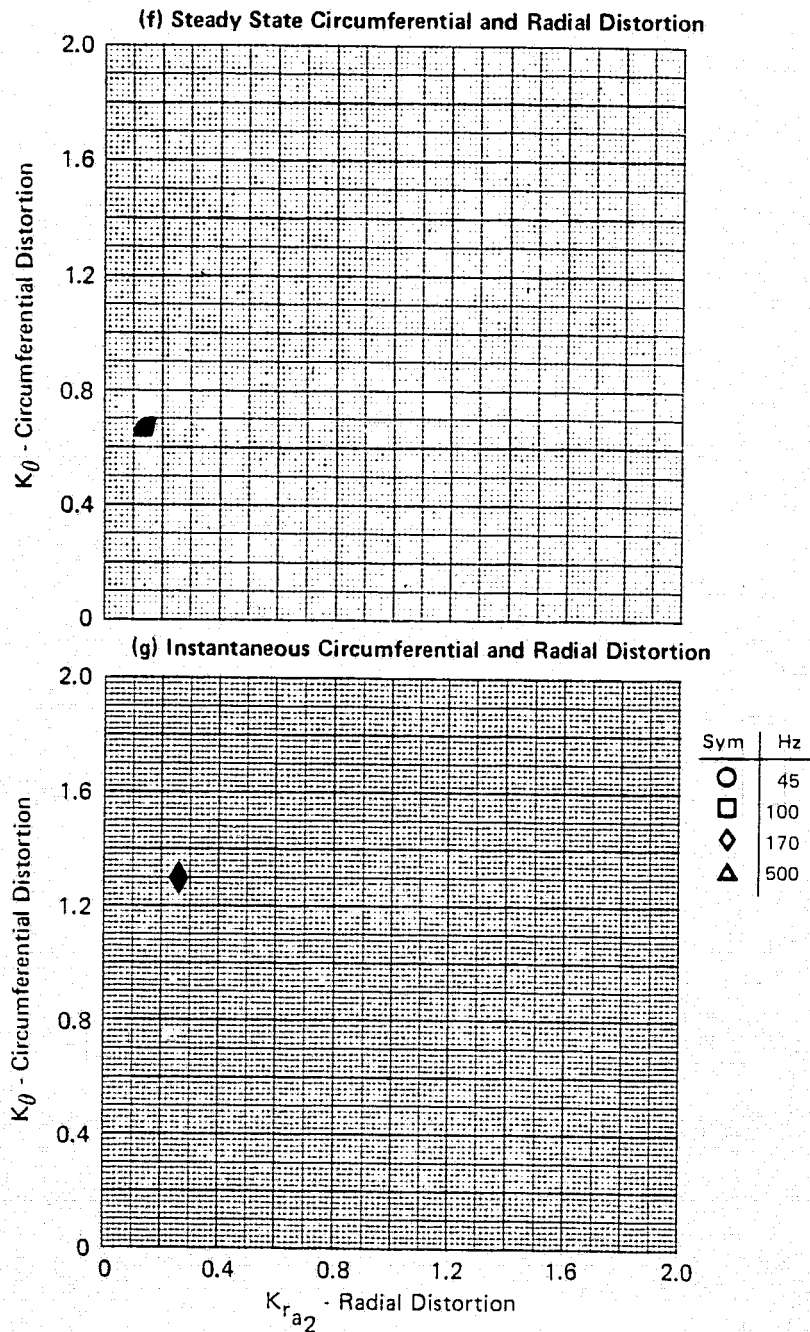
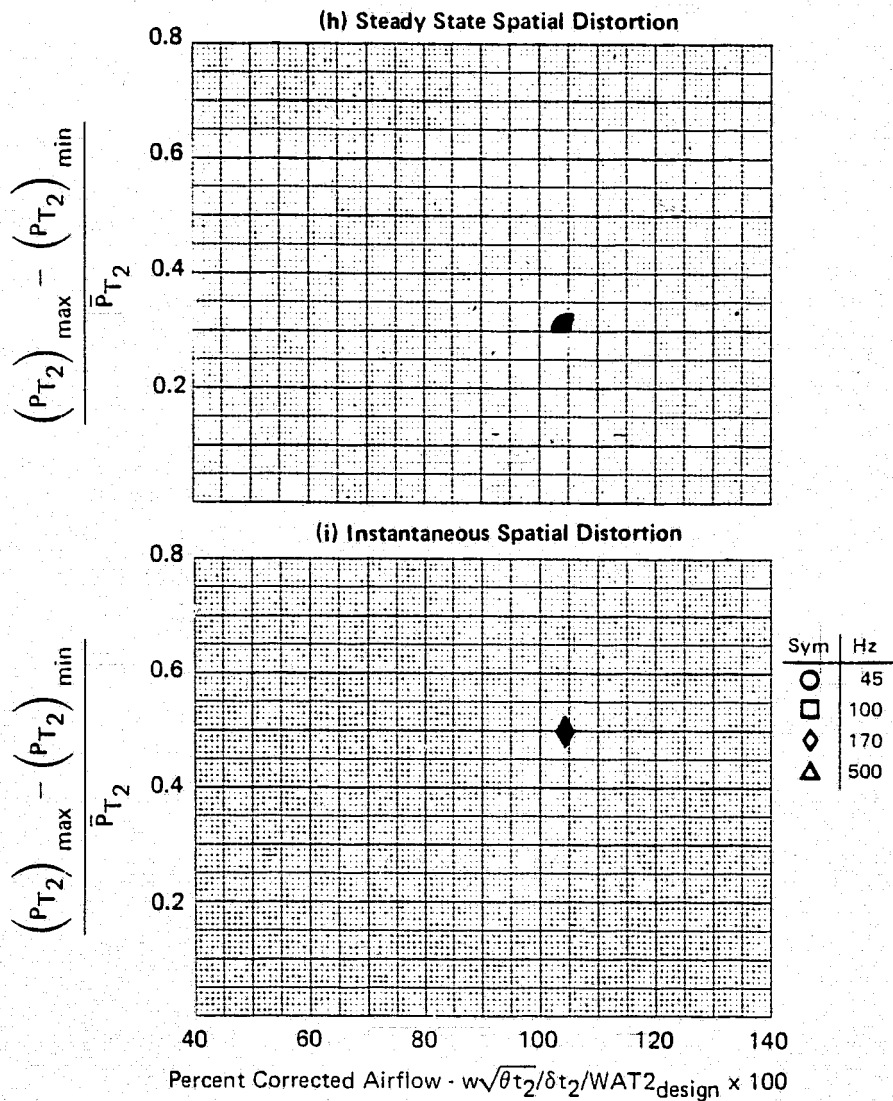


FIGURE G-1 (Continued)
INLET DISTORTION ANALYSIS PLOTS
 $M_o = 0.4$ $\alpha = 16.4$ $\beta = -0.8$ $WAT2 = 104.1\%$

FLIGHT - NASA Data Study
 Part/Point - 422/4, Ident 1
 RHO DELTA3 BYPASS CIVV
 6.9 27.6 0.0 -5.00



GP77-0658-4

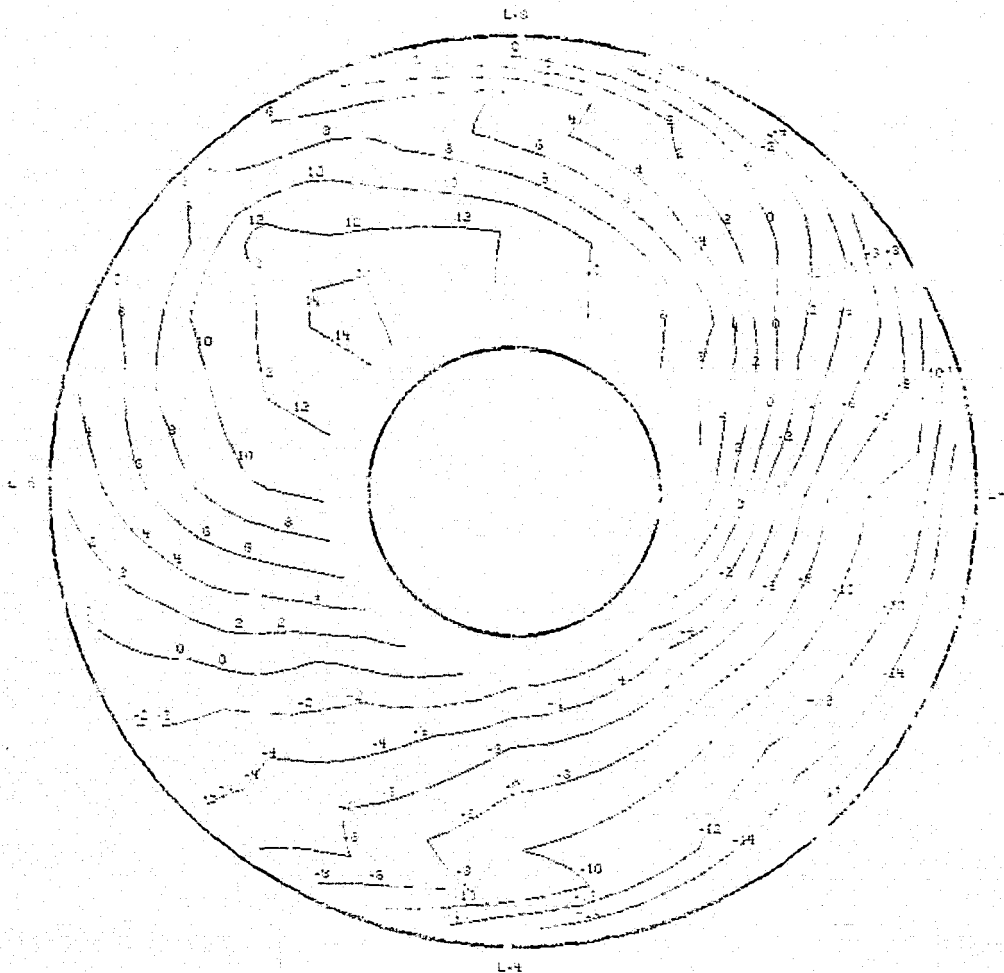
FIGURE G-1 (Continued)
INLET DISTORTION ANALYSIS PLOTS
 $M_0 = 0.4$ $\alpha = 16.4$ $\beta = -0.8$ $WAT2 = 104.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 422/4 IDENT. 1
THE SEGMENT START TIME WAS AT 21:12:22.657

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.4	16.4	-0.8	6546(21476)	6.9	27.6	0.0	104.1%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	O2
31.03(4,501)	1.0	.6564	.1411	.1885	.8461	.6079	—	.3100

1(j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 31.03 kPa (4.501 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

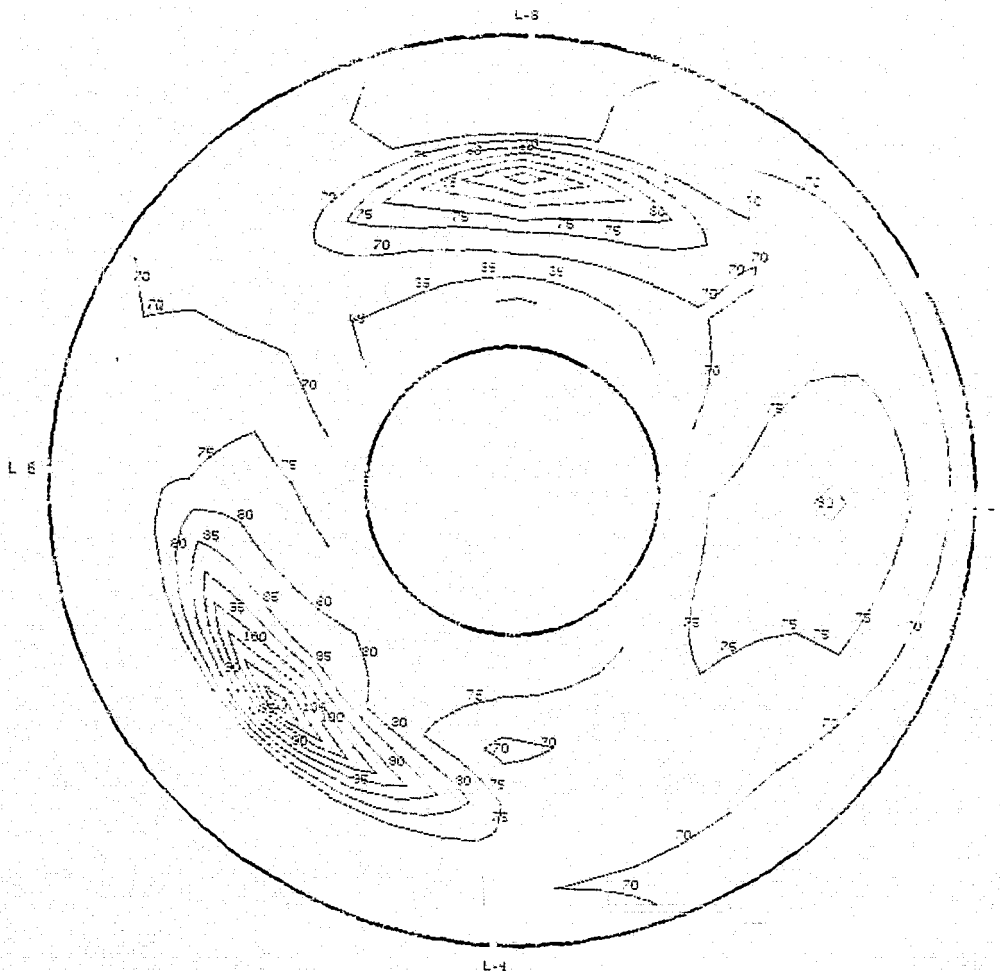
FIGURE G-1 (Continued)
INLET DISTORTION ANALYSIS PLOTS
 $M_0 = 0.4$ $\alpha = 16.4$ $\beta = -0.8$ $WAT2 = 104.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 422/4 IDENT. 1
THE SEGMENT START TIME WAS AT 21:12:22.657

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.4	16.4	-0.8	6546(21476)	6.9	27.6	0.0	104.1%	-5.00

1(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0728

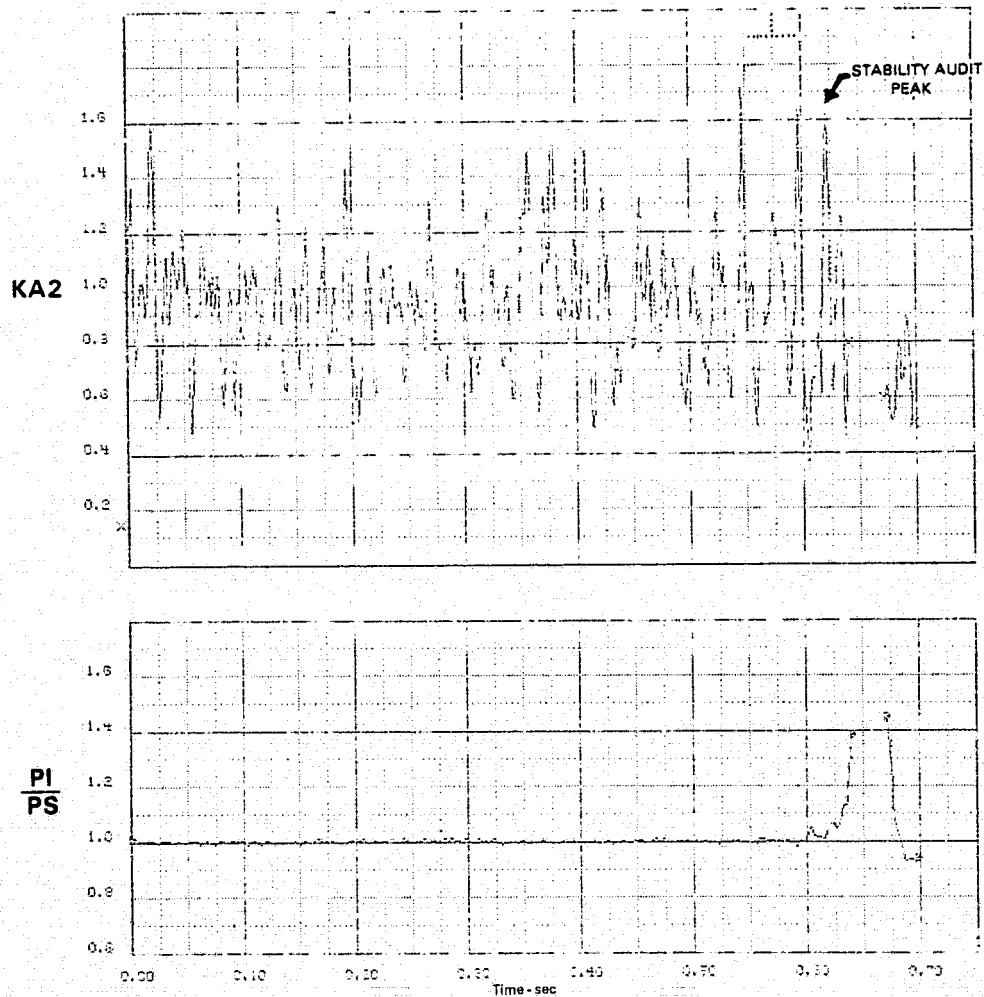
FIGURE G-1 (Continued)
INLET DISTORTION ANALYSIS PLOTS
 $M_0 = 0.4$ $\alpha = 16.4$ $\beta = -0.8$ $WAT2 = 104.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 422/4 IDENT. 1
THE SEGMENT START TIME WAS AT 21:12:22.657

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.4	16.4	-0.8	6542(21462)	6.9	27.6	0.0	104.1%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	K0SP	D2
33.16 (4.810)	1.0687	1.3059	.2556	.3517	1.6575	1.2347	1.3749	.5046

1(I) Time History Plots 170 Hz



STABILITY AUDIT PEAK AT TIME = .62122 SECONDS

FIGURE G-1 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.4$, $\alpha = 16.4$, $\beta = -0.8$, $WAT2 = 104.1\%$

(U)

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 422/4 IDENT.1
THE SEGMENT START TIME WAS AT 21:12:22.657

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.4	16.4	-0.8	6542(21462)	6.9	27.6	0.0	104.1%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
33.16 (4.810)	1.0687	1.3059	.2556	.3517	1.6575	1.2347	1.3749	.5046

1(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 30.96 kPa (4.49 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.54676 SECONDS

FIGURE G-1 (Concluded)
INLET DISTORTION ANALYSIS PLOTS
 $M_0 = 0.4$ $\alpha = 16.4$ $\beta = -0.8$ $WAT2 = 104.1\%$

FLIGHT - NASA Data Study
 Part/Point - 417/5, Ident 2
 RHO DELTA3 BYPASS CIVV
 7.0 26.6 0.0 -6.80

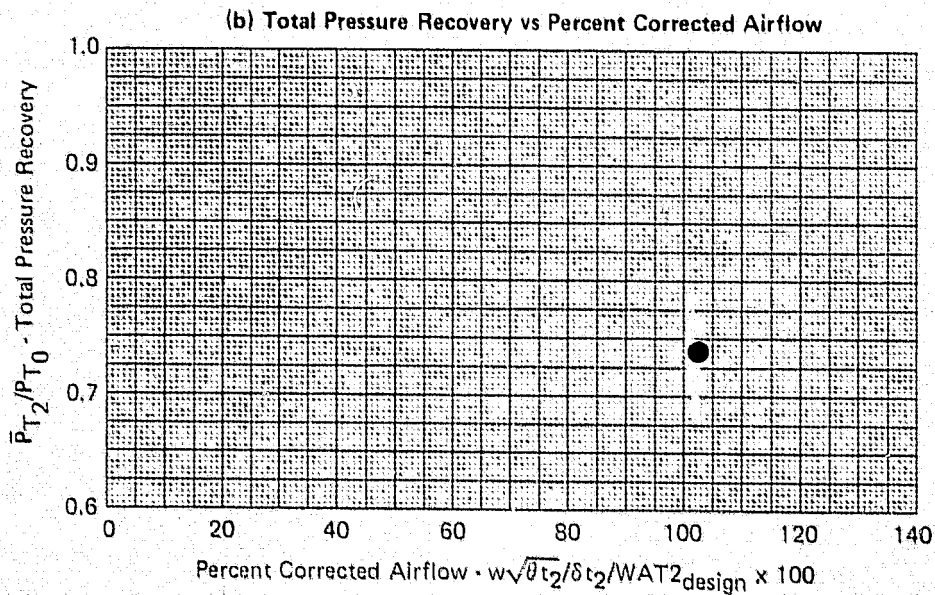
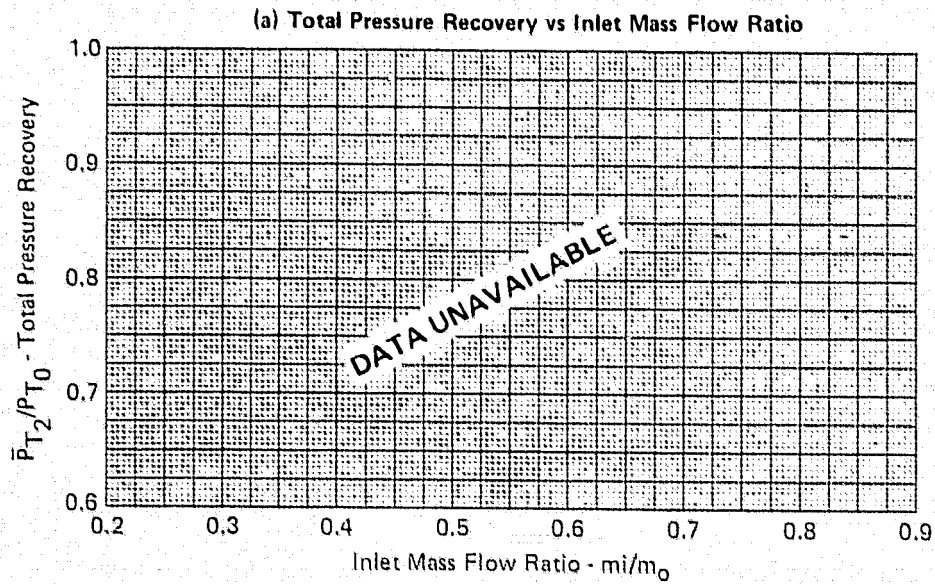
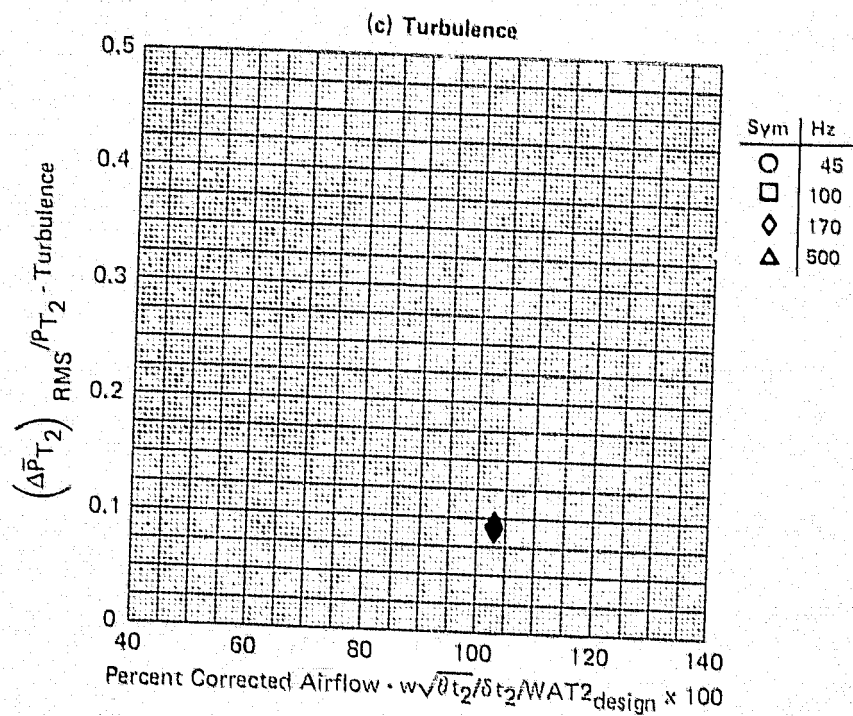


FIGURE G-2
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.59$, $\alpha = 13.9$, $\beta = 0.9$, $WAT2 = 102.7\%$

GP77-0658-1

FLIGHT - NASA Data Study
 Part/Point - 417/5, Ident 2
 RHO DELTA3 BYPASS CIVV
 7.0 26.6 0.0 -6.80

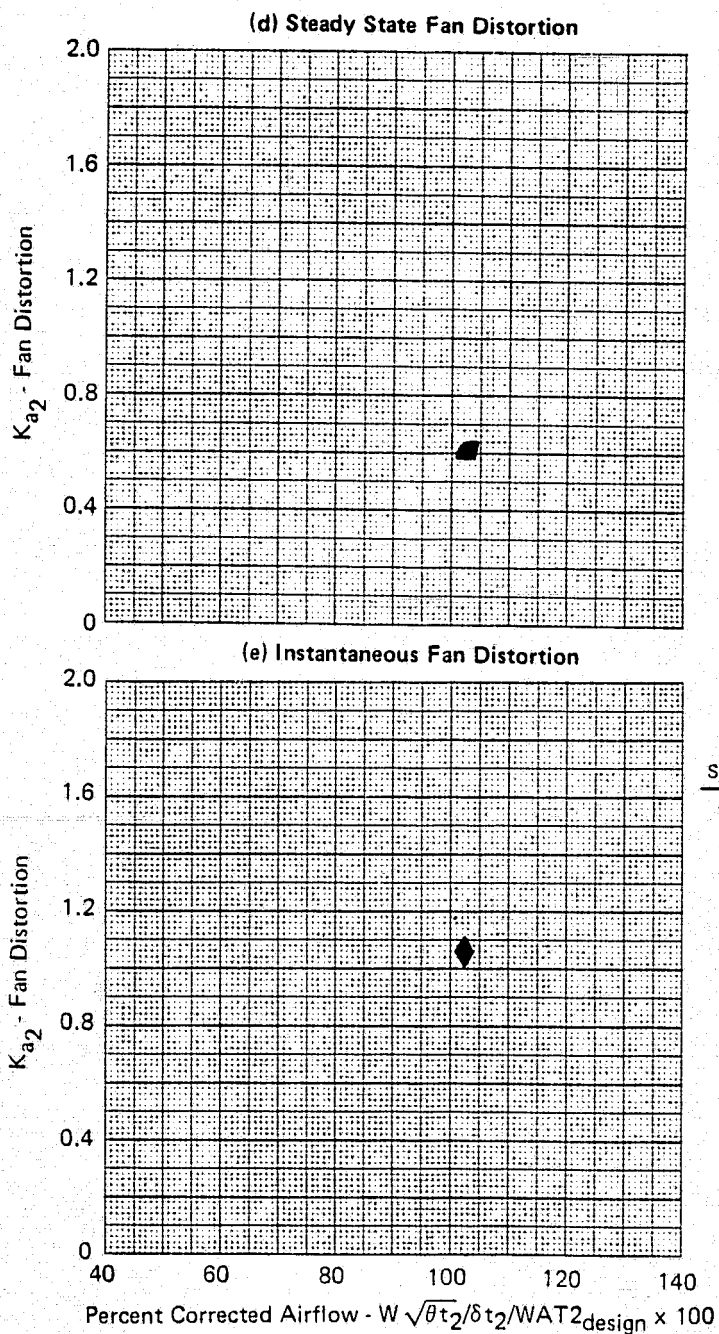


GP77-0859-5

FIGURE G-2 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.59$, $\alpha = 13.9$, $\beta = 0.9$, $WAT2 = 102.7\%$

FLIGHT - NASA Data Study
Part/Point - 417/5, Ident 2

RHO DELTA3 BYPASS CIVV
7.0 26.6 0.0 -6.80



GP77-0658-3

FIGURE G-2 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.59$, $\alpha = 13.9$, $\beta = 0.9$, $WAT2 = 102.7\%$

FLIGHT - NASA Data Study
 Part/Point - 417/5, Ident 2
 RHO DELTA3 BYPASS CIVV
 7.0 26.6 0.0 -6.80

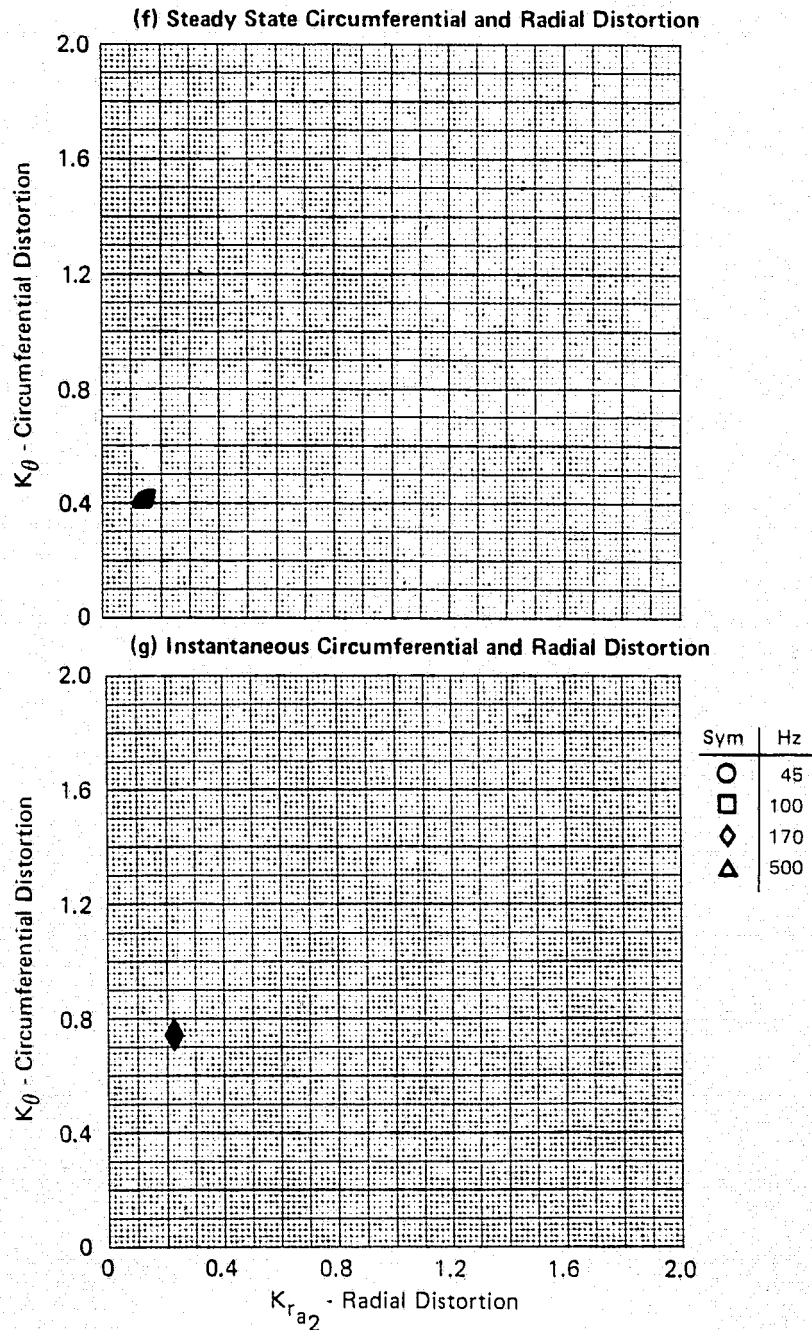
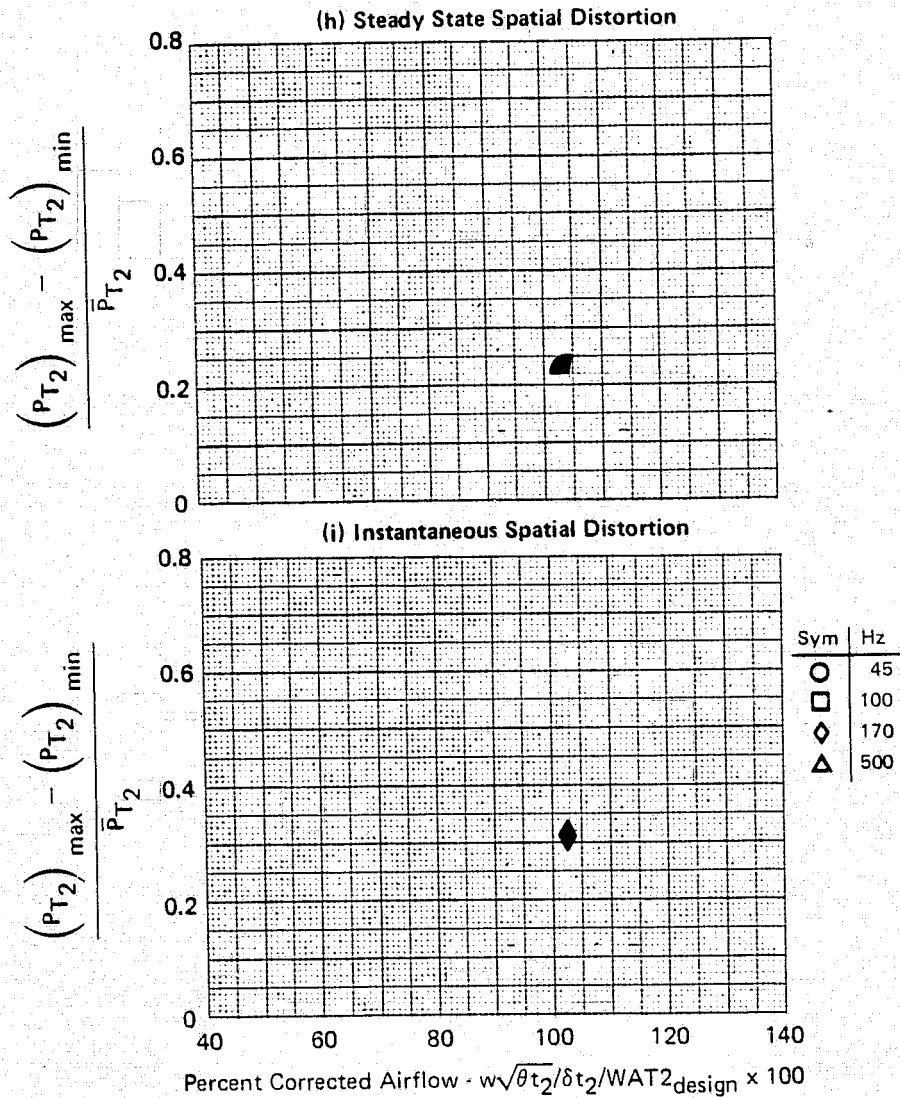


FIGURE G-2 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.59$, $\alpha = 13.9^\circ$, $\beta = 0.9$, WAT2 = 102.7 %

FLIGHT - NASA Data Study
 Part/Point - 417/5, Ident 2
 RHO DELTA3 BYPASS CIVV
 7.0 26.6 0.0 -6.80



GP77-0658-4

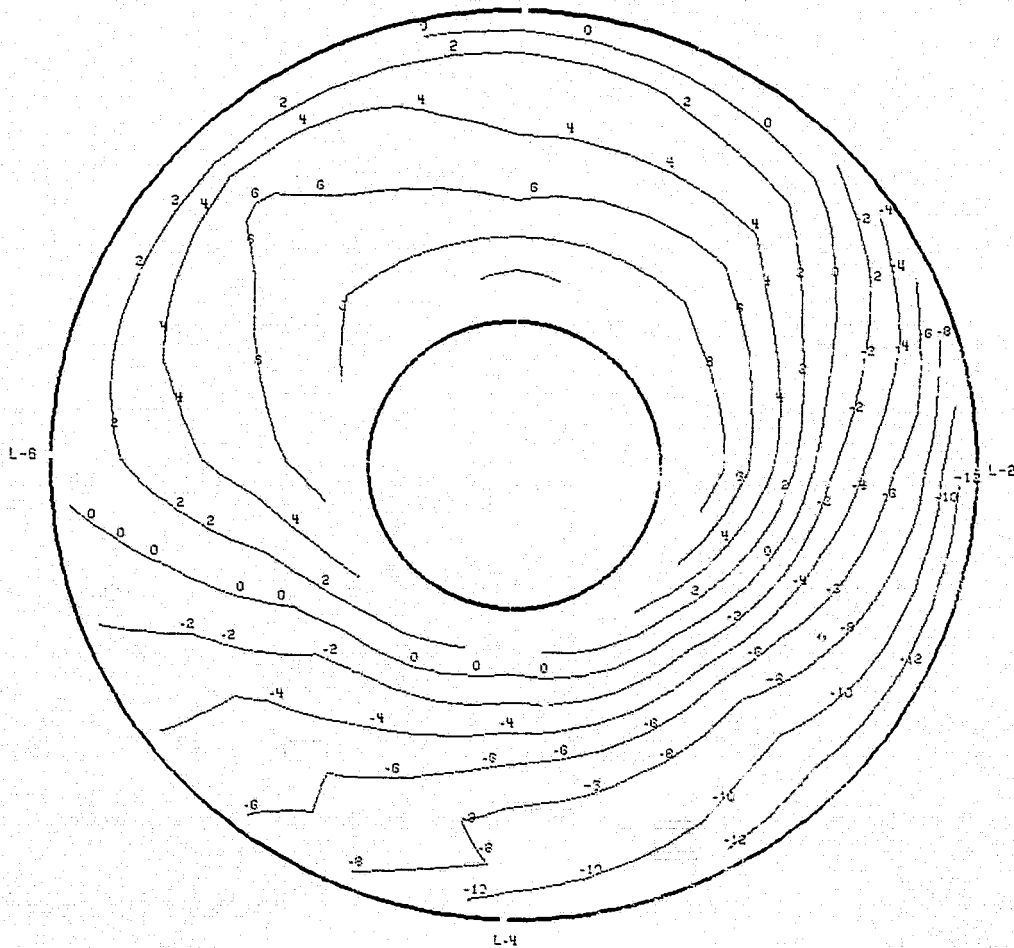
FIGURE G-2 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.59$, $\alpha = 13.9$, $\beta = 0.9$, $WAT2 = 102.7\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/5 IDENT. 2
THE SEGMENT START TIME WAS AT 17:20:38.229

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.59	13.9	0.9	7088(23255)	7.0	26.6	0.0	102.7%	-6.80
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
37.91(5.498)	1.0	.3998	.1402	.1992	.5995	.3580	—	.2321

2(j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 37.91 kPa (5.498 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

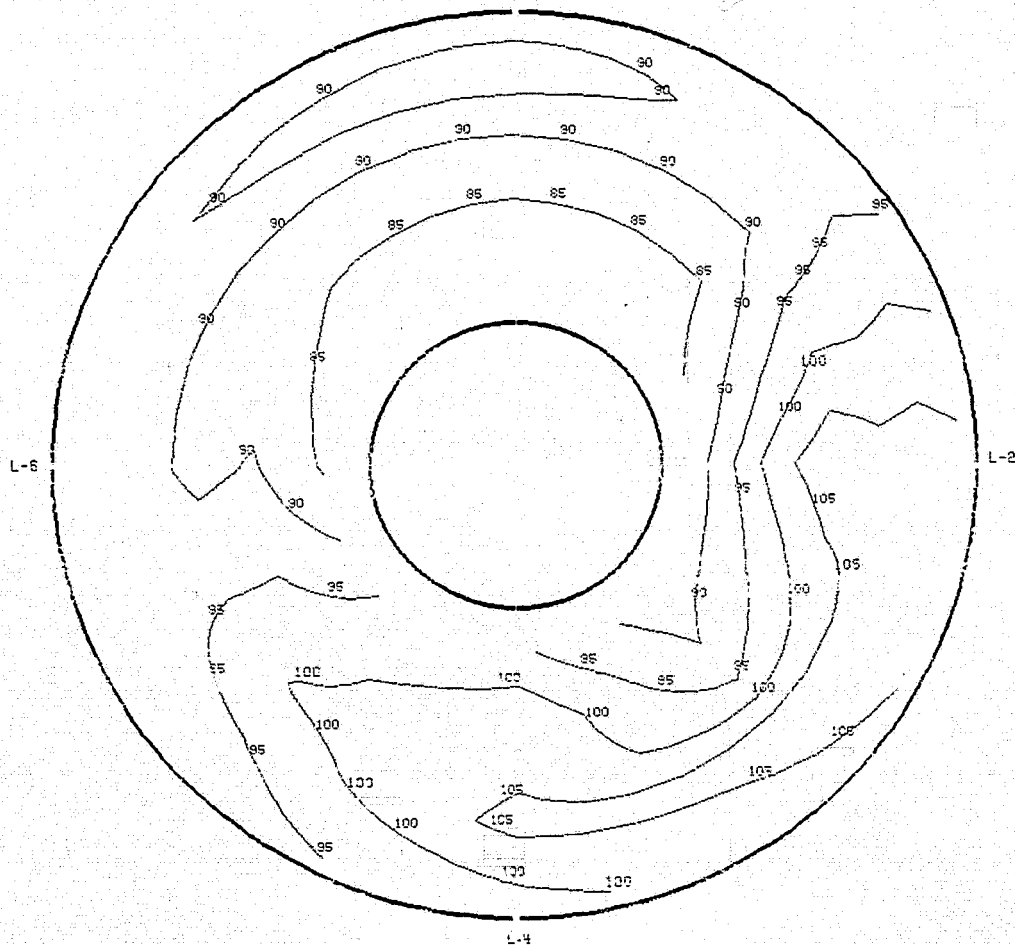
FIGURE G-2 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .59$, $\alpha = 13.9$, $\beta = 0.9$, $WAT2 = 102.7\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/5 IDENT.2
THE SEGMENT START TIME WAS AT 17:20:38.229

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.59	13.9	0.9	7088(23255)	7.0	26.6	0.0	102.7%	-6.80

**2(k) Turbulence Contour
170 Hz**



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0944

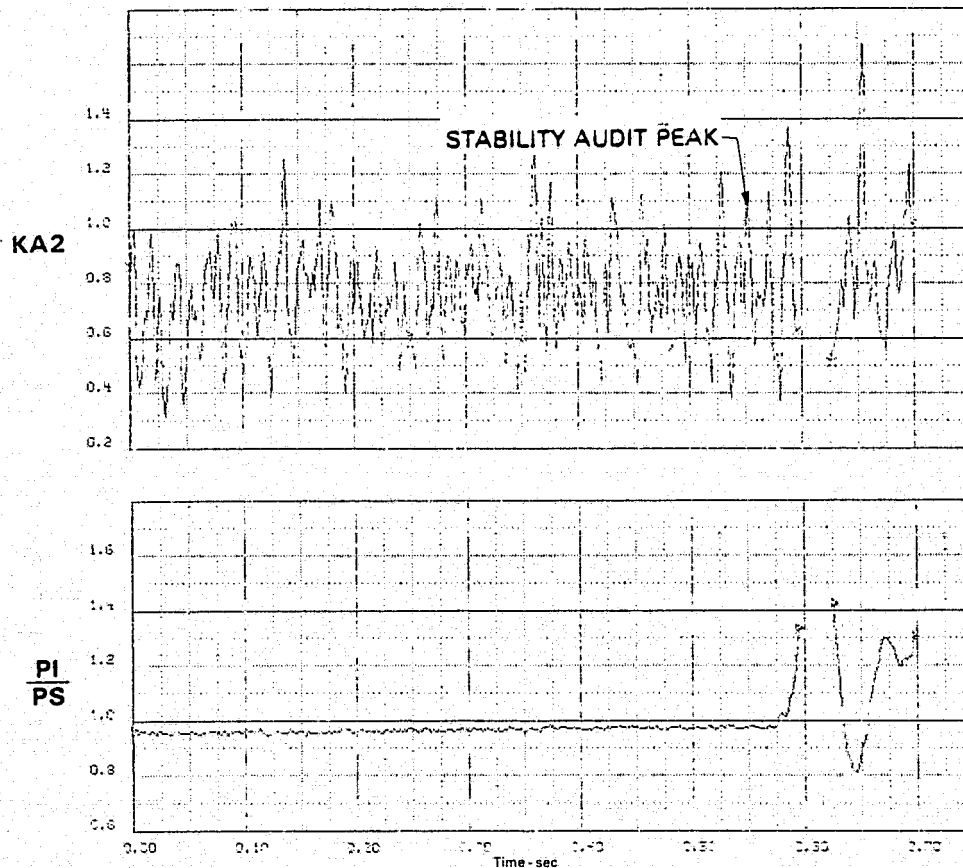
FIGURE G-2 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .59$, $\alpha = 13.9$, $\beta = 0.9$, WAT2 = 102.7%

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/5 IDENT. 2
THE SEGMENT START TIME WAS AT 17:20:38.229

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.59	13.9	0.9	7081(23232)	7.0	26.6	0.0	102.7%	-6.80
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
36.20 (5.250)	.9549	.7464	.2296	.3274	1.0737	.6930	.7091	.3186

2 (I) Time History Plots 170 Hz



STABILITY AUDIT PEAK AT TIME = .55233 SECONDS

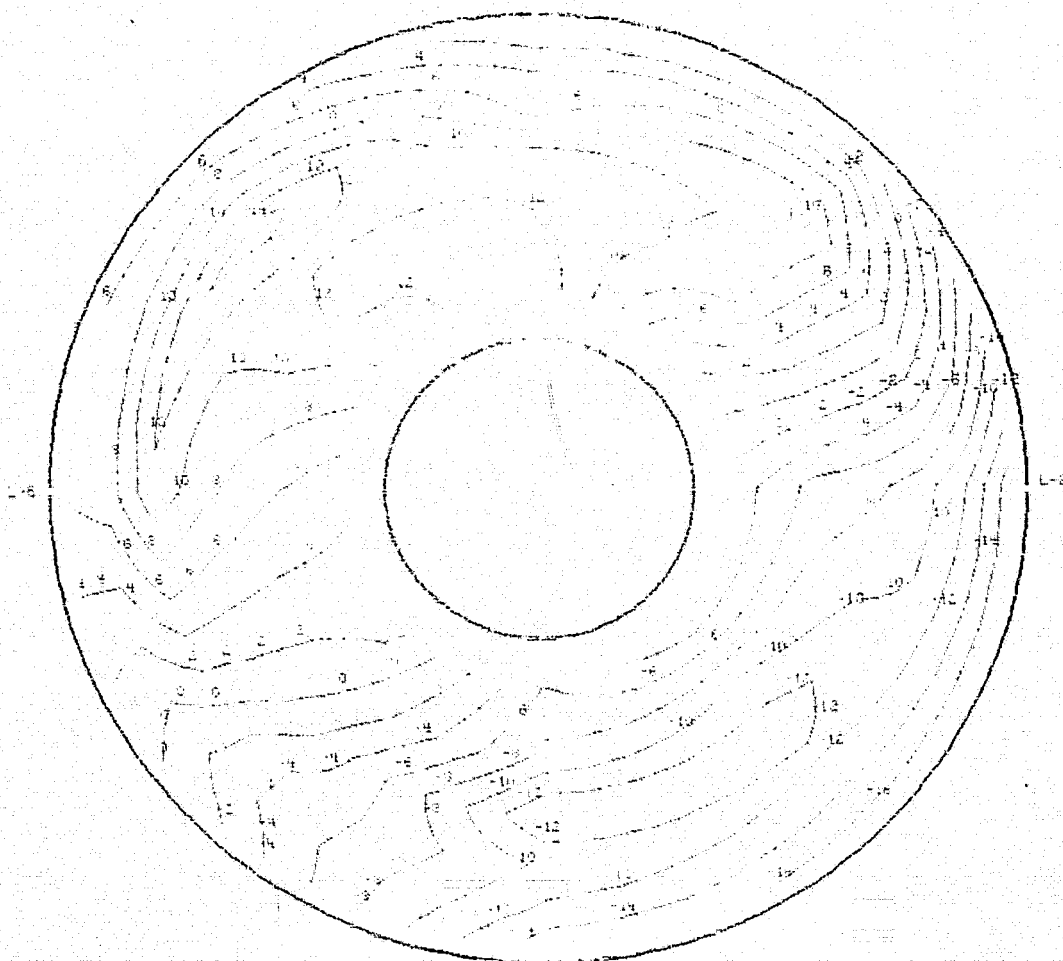
FIGURE G-2 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.59$, $\alpha = 13.9$, $\beta = 0.9$, $WAT2 = 102.7\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/5 IDENT. 2
THE SEGMENT START TIME WAS AT 17:20:38.229

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.59	13.9	0.9	7081(23232)	7.0	26.6	0.0	102.7%	-6.80
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
36.20 (5.250)	.9549	.7464	.2296	.3274	1.0737	.6930	.7091	.3186

2(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



FLIGHT - NASA Data Study
 Part/Point - 417/4, Ident 3
 RHO DELTA3 BYPASS CIVV
 7.0 27.6 0.0 -5.00

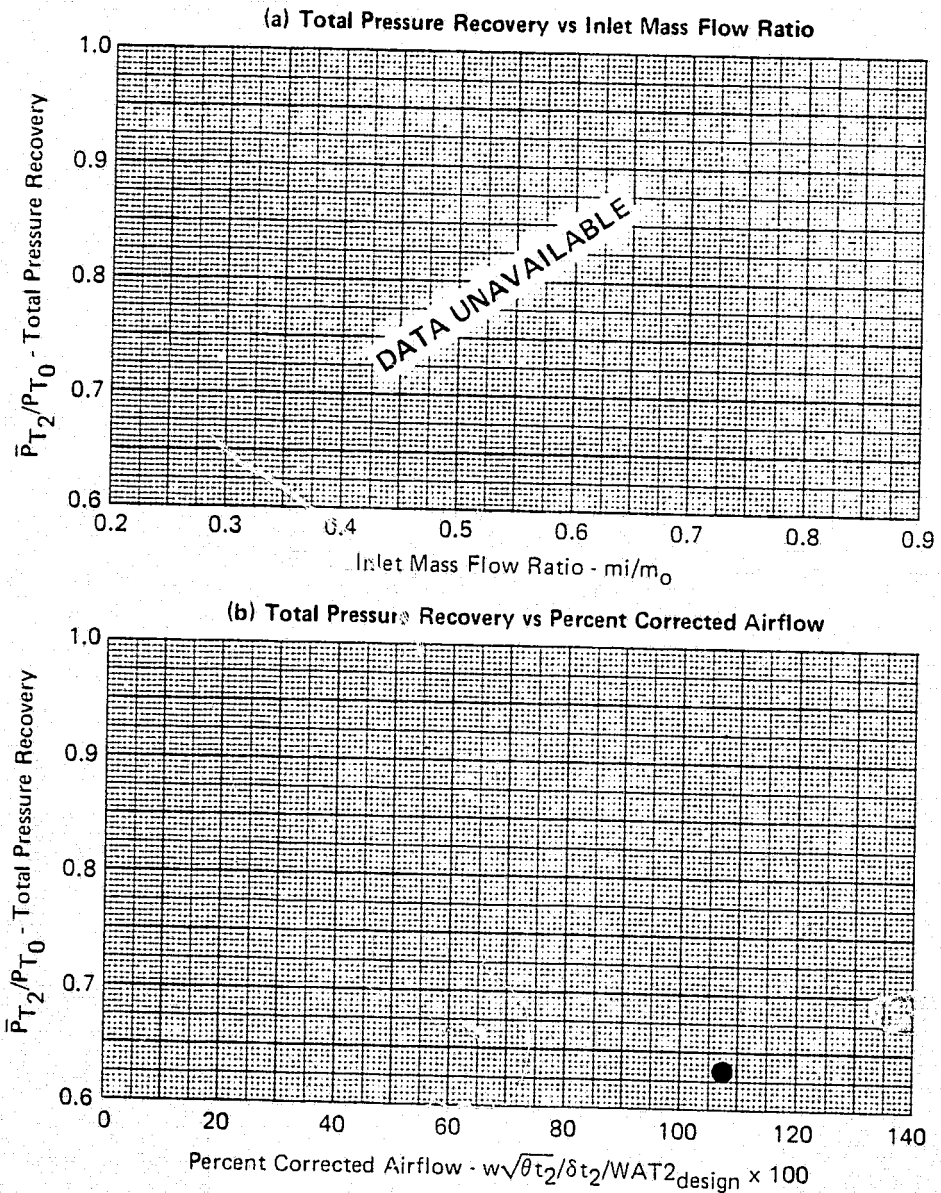
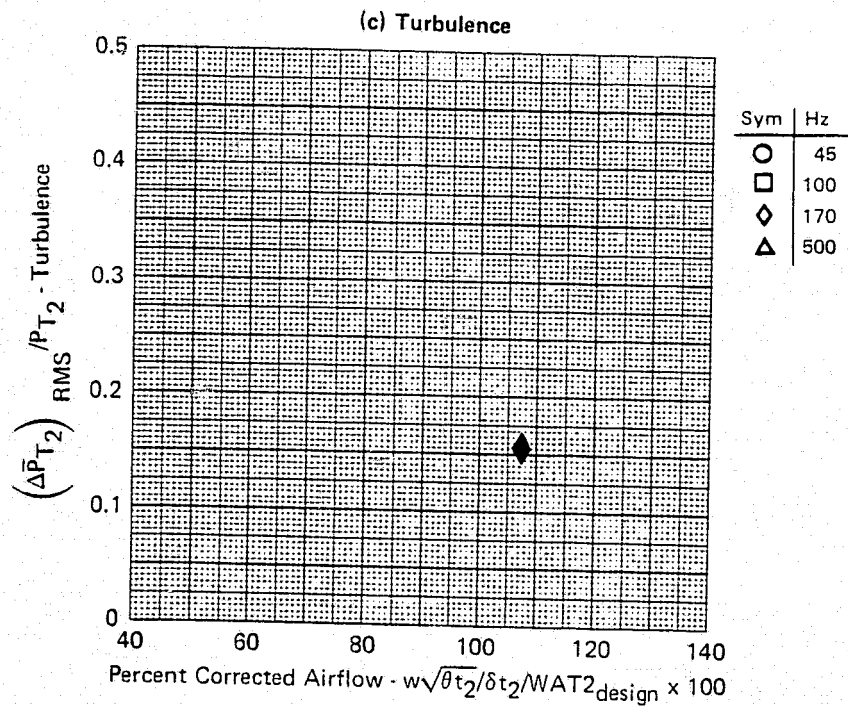


FIGURE G-3
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.52, \alpha = 10.0, \beta = 0.7, WAT2 = 107.1 \%$

GP77-0658-1

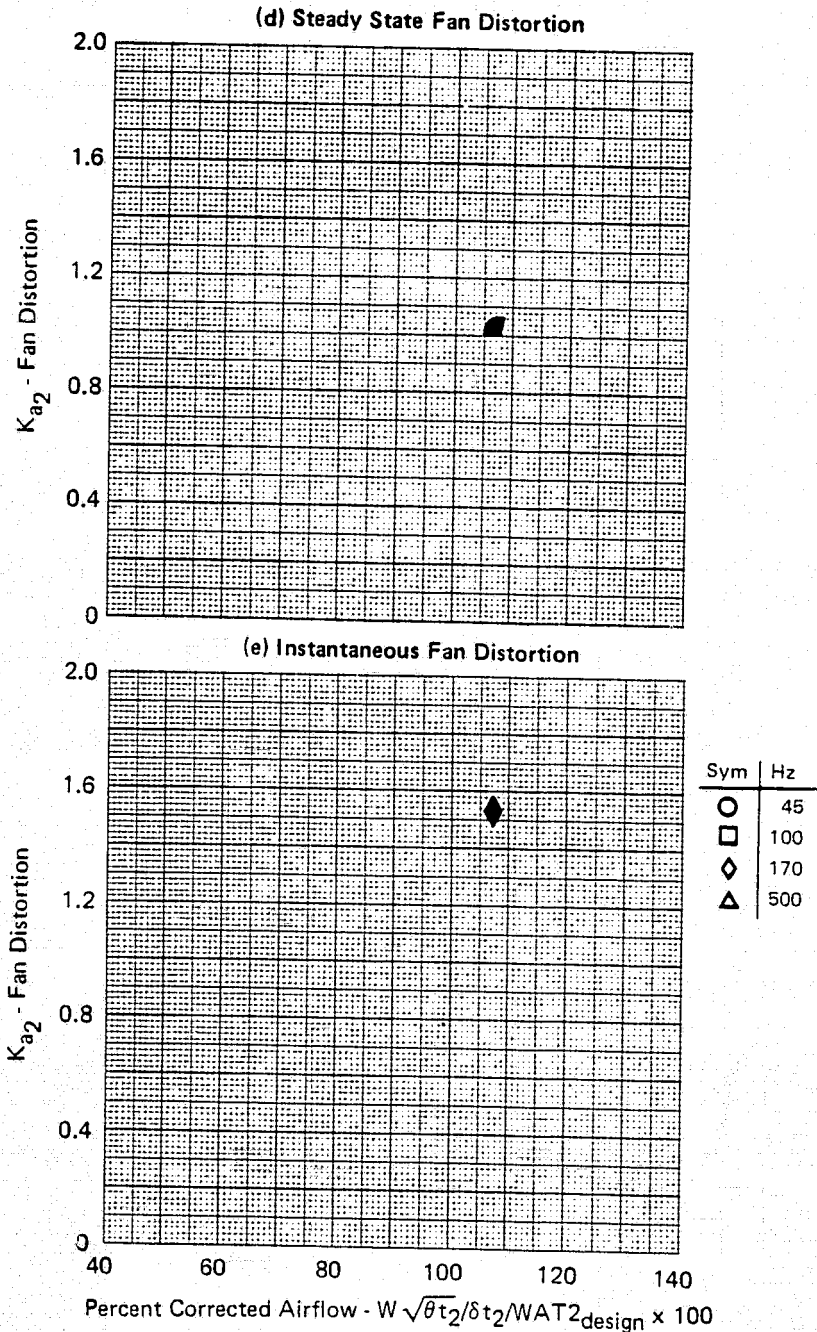
FLIGHT - NASA Data Study
 Part/Point - 417/4, Ident 3
 RHO DELTA3 BYPASS CIVV
 7.0 27.6 0.0 -5.00



GP77-0658-5

FIGURE G-3 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.52$, $\alpha = 10.0$, $\beta = 0.7$, $WAT2 = 107.1\%$

FLIGHT - NASA Data Study
 Part/Point - 417/4, Ident 3
 RHO DELTA3 BYPASS CIVV
 7.0 27.6 0.0 -5.00



GP77-0658-3

FIGURE G-3 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.52, \alpha = 10.0, \beta = 0.7, WAT2 = 107.1\%$

FLIGHT - NASA Data Study
 Part/Point - 417/4, Ident 3
 RHO DELTA3 BYPASS CIVV
 7.0 27.6 0.0 -5.00

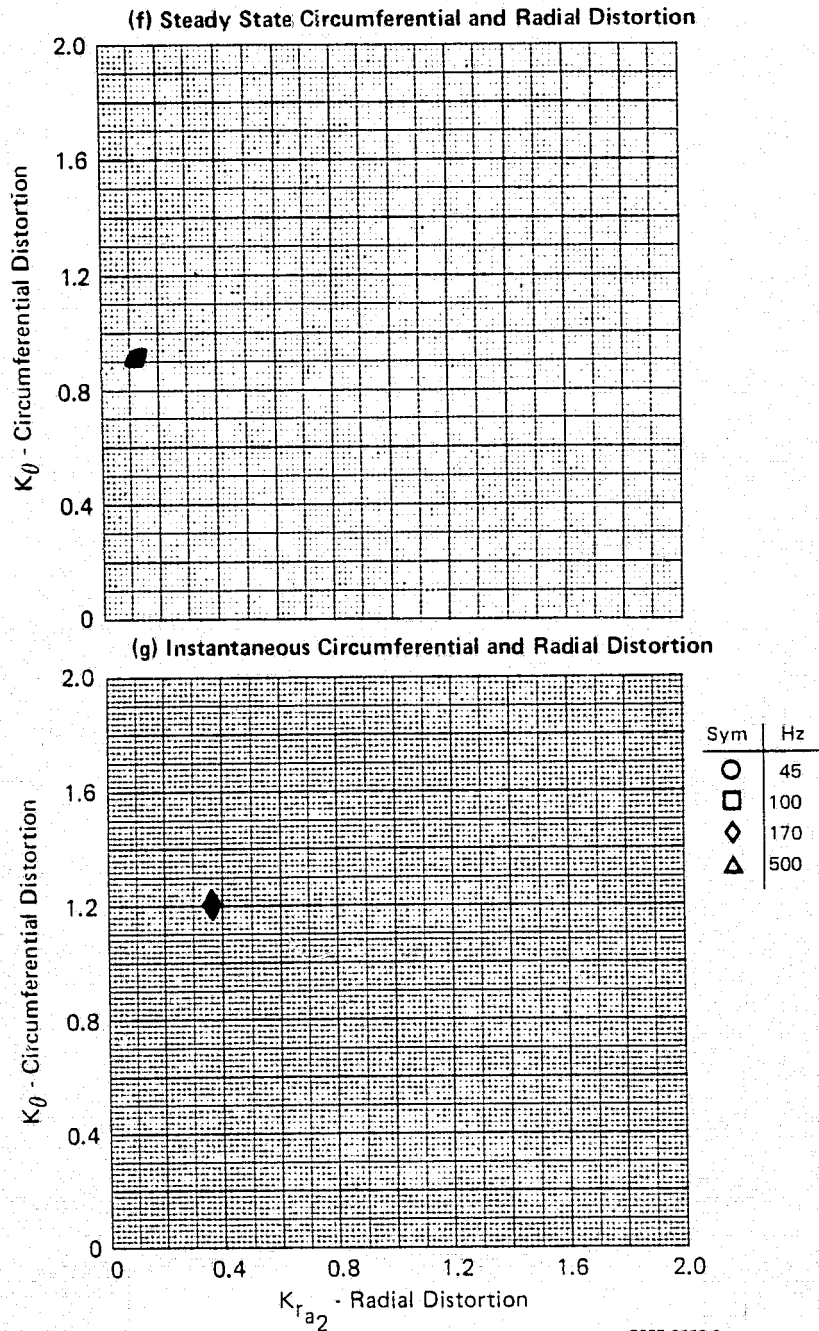
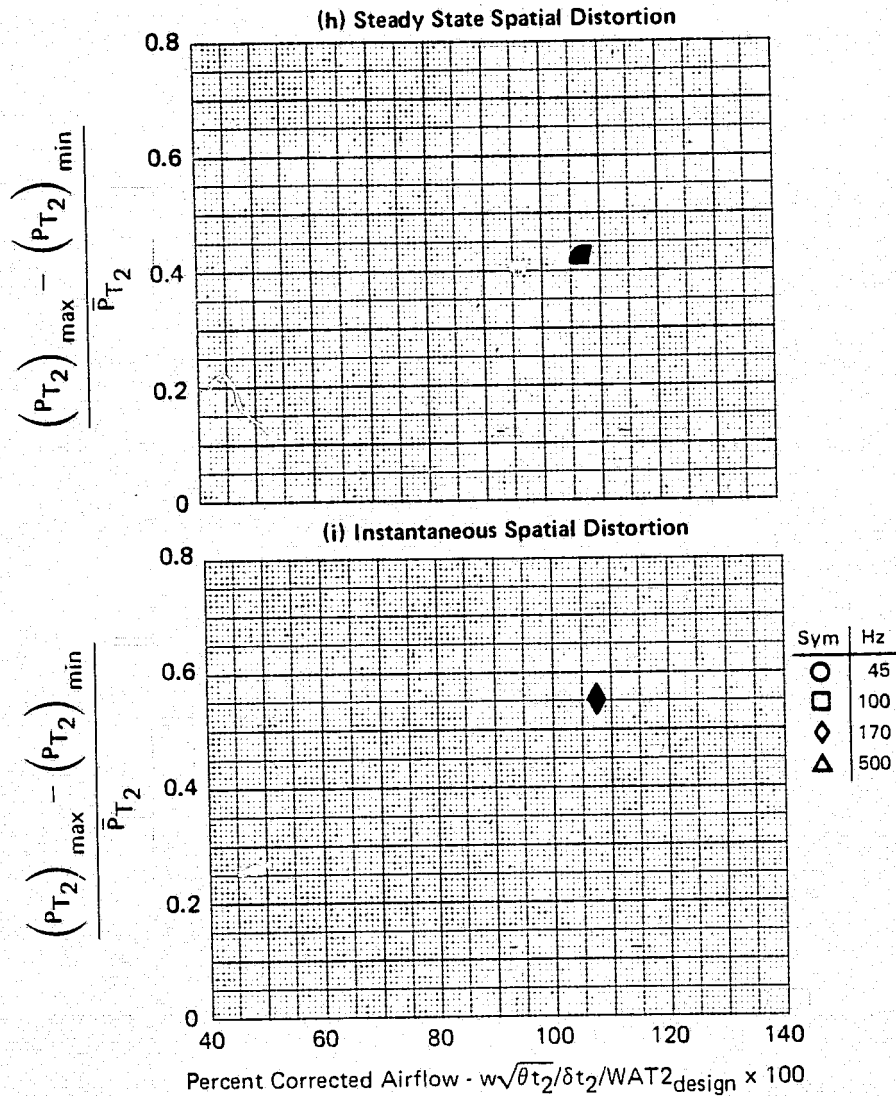


FIGURE G-3 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.52$, $\alpha = 10.0$, $\beta = 0.7$, WAT2 = 107.1 %

FLIGHT - NASA Data Study
 Part/Point - 417/4, Ident 3
 RHO DELTA3 BYPASS CIVV
 7.0 27.6 0.0 -5.00



GP77-0658-4

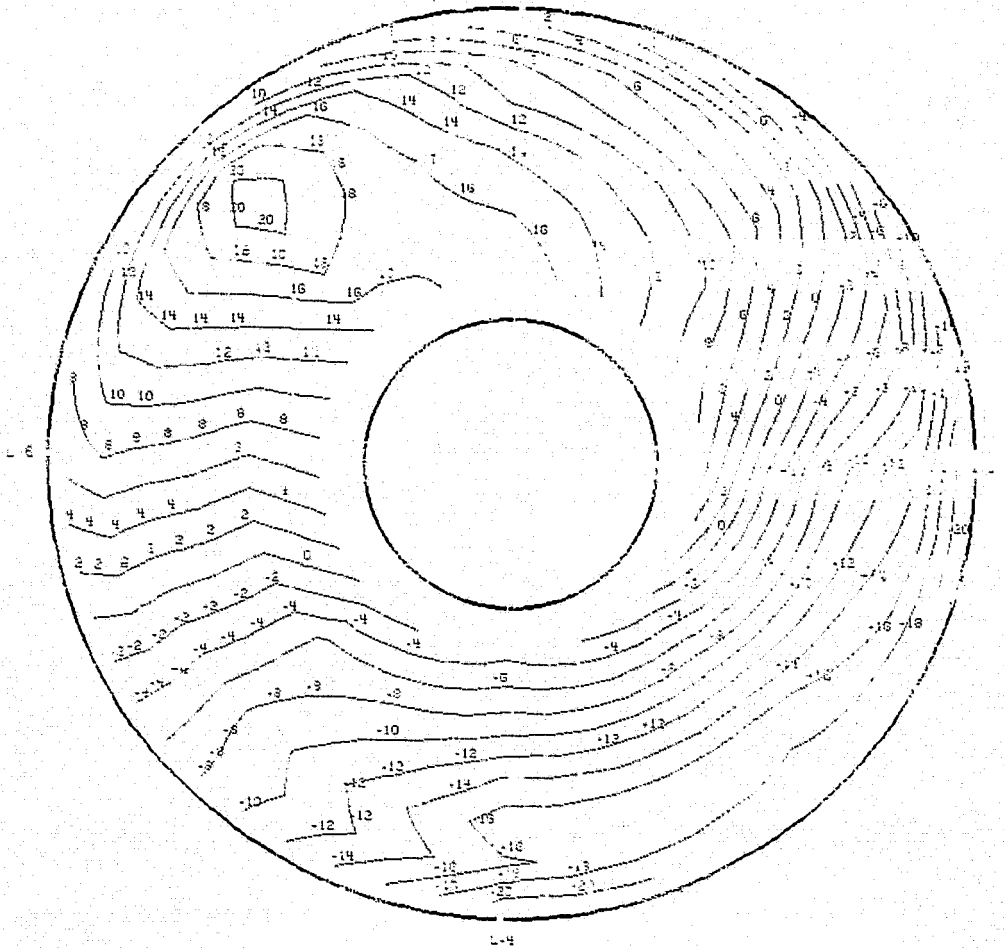
FIGURE G-3 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.52, \alpha = 10.0, \beta = 0.7, WAT2 = 107.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/4 IDENT.3
THE SEGMENT START TIME WAS AT 17:18:27.538

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.52	10.0	0.7	10174(33380)	7.0	27.6	0.0	107.1%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
19.63(2.846)	1.0	.9089	.1259	.1172	1.0292	.7626	—	.4232

3 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 19.63 kPa (2.846 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

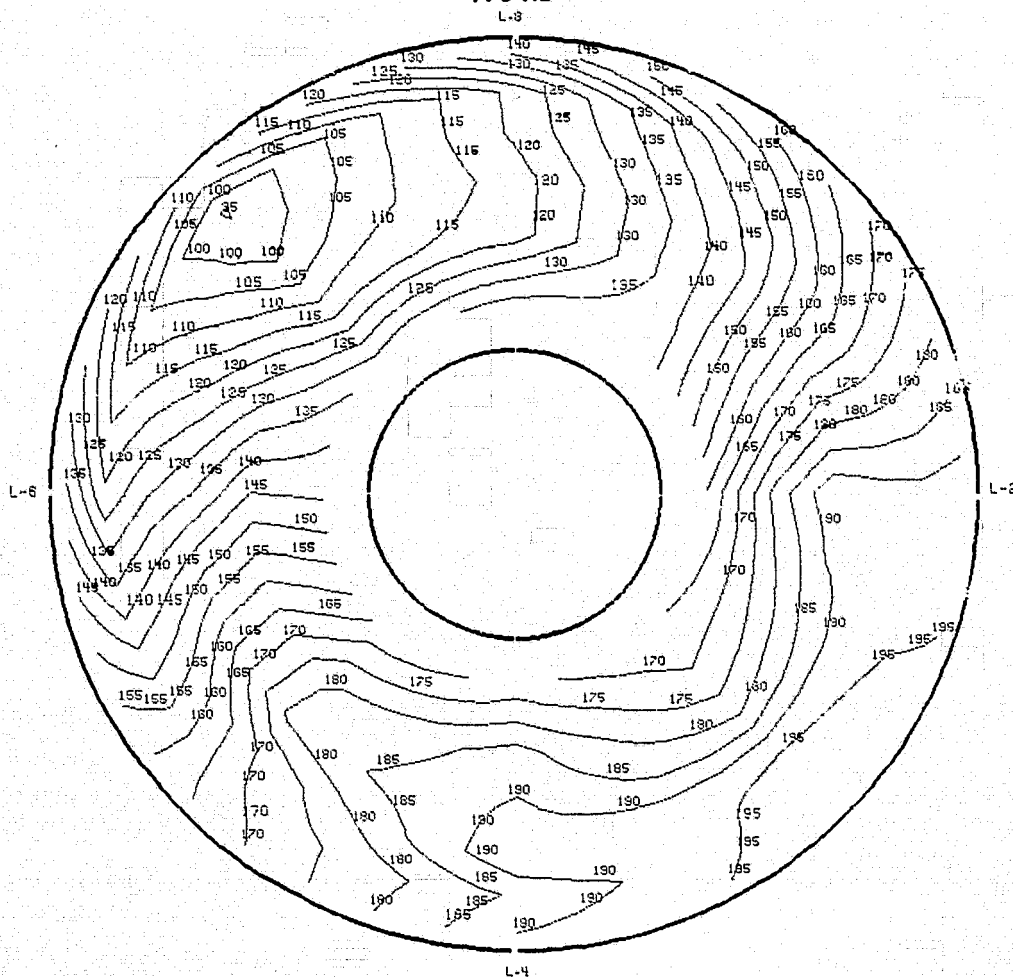
FIGURE G-3 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .52$, $\alpha = 10$, $\beta = 0.7$, $WAT2 = 107.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/4 IDENT. 3
THE SEGMENT START TIME WAS AT 17:18:27.538

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.52	10.0	0.7	10174(33380)	7.0	27.6	0.0	107.1%	-5.00

**3(k) Turbulence Contour
170 Hz**



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.1558

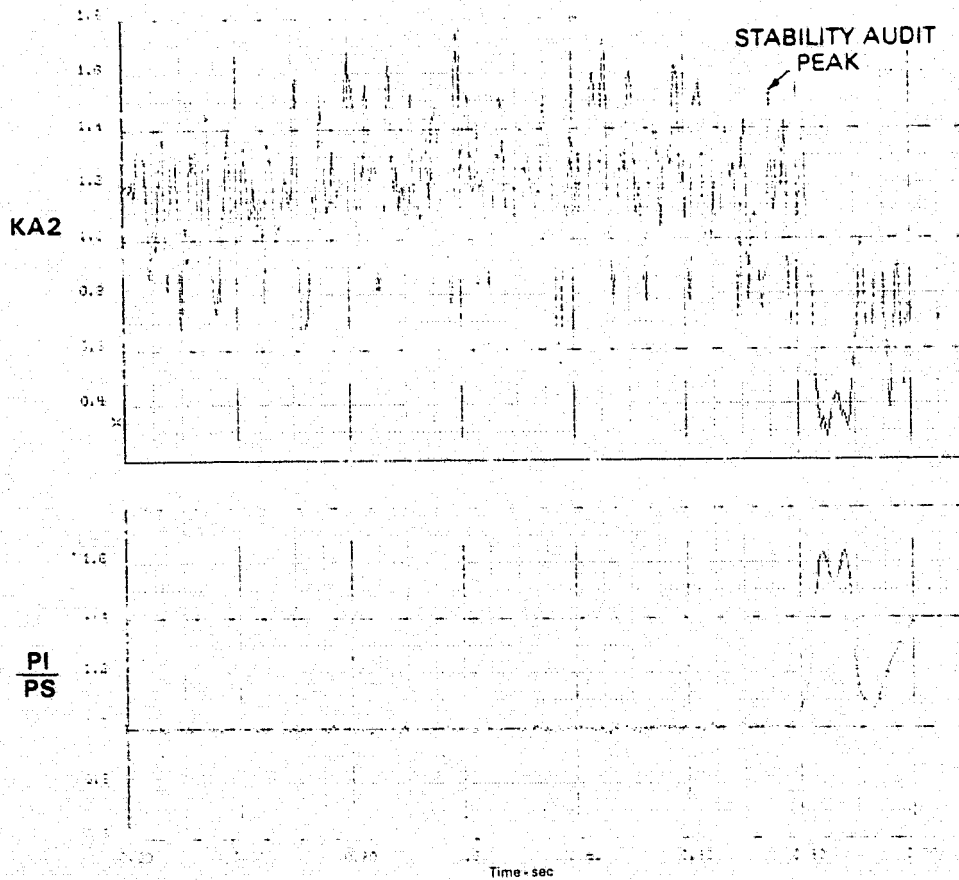
**FIGURE G-3 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .52$, $\alpha = 10$, $\beta = 0.7$, $WAT2 = 107.1\%$**

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/4 IDENT. 3
THE SEGMENT START TIME WAS AT 17:18:27.538

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.52	10.0	0.7	10176(33386)	7.0	27.6	0.0	107.1%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	K0SP	D2
19.79 (2.870)	1.0084	1.2020	.3598	.3357	1.5369	.8566	.9835	.5564

3(l) Time History Plots 170 Hz



STABILITY AUDIT PEAK AT TIME = .057567 SECONDS

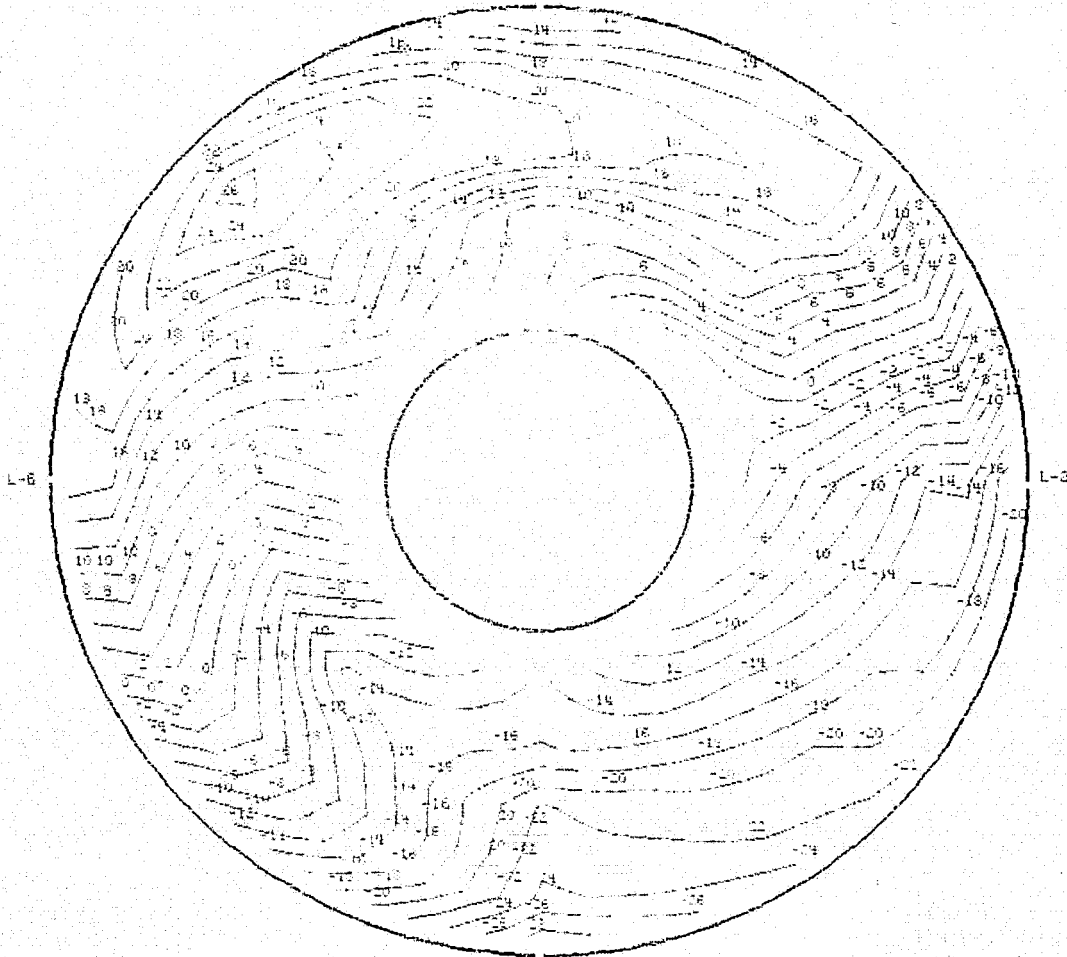
FIGURE G-3 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .52$, $\alpha = 10$, $\beta = 0.7$, WAT2 = 107.1 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/4 IDENT. 3
THE SEGMENT START TIME WAS AT 17:18:27.538

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.52	10.0	0.7	10176(33386)	7.0	27.6	0.0	107.1%	-5.00
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	K0SP	D2
19.79 (2.870)	1.0084	1.2020	.3598	.3357	1.5369	.8566	.9835	.5564

3(m) Instantaneous Total Pressure Contour at Peak Instantaneous Ka_2
170 Hz



MEAN FACE PRESSURE = 19.31 kPa (2.800 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.57567 SECONDS

FIGURE G-3 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .52$, $\alpha = 10$, $\beta = 0.7$, $WAT2 = 107.1\%$

FLIGHT - NASA Data Study
 Part/Point - 417/2, Ident 4
 RHO DELTA3 BYPASS CIVV
 7.0 26.5 0.0 -5.00

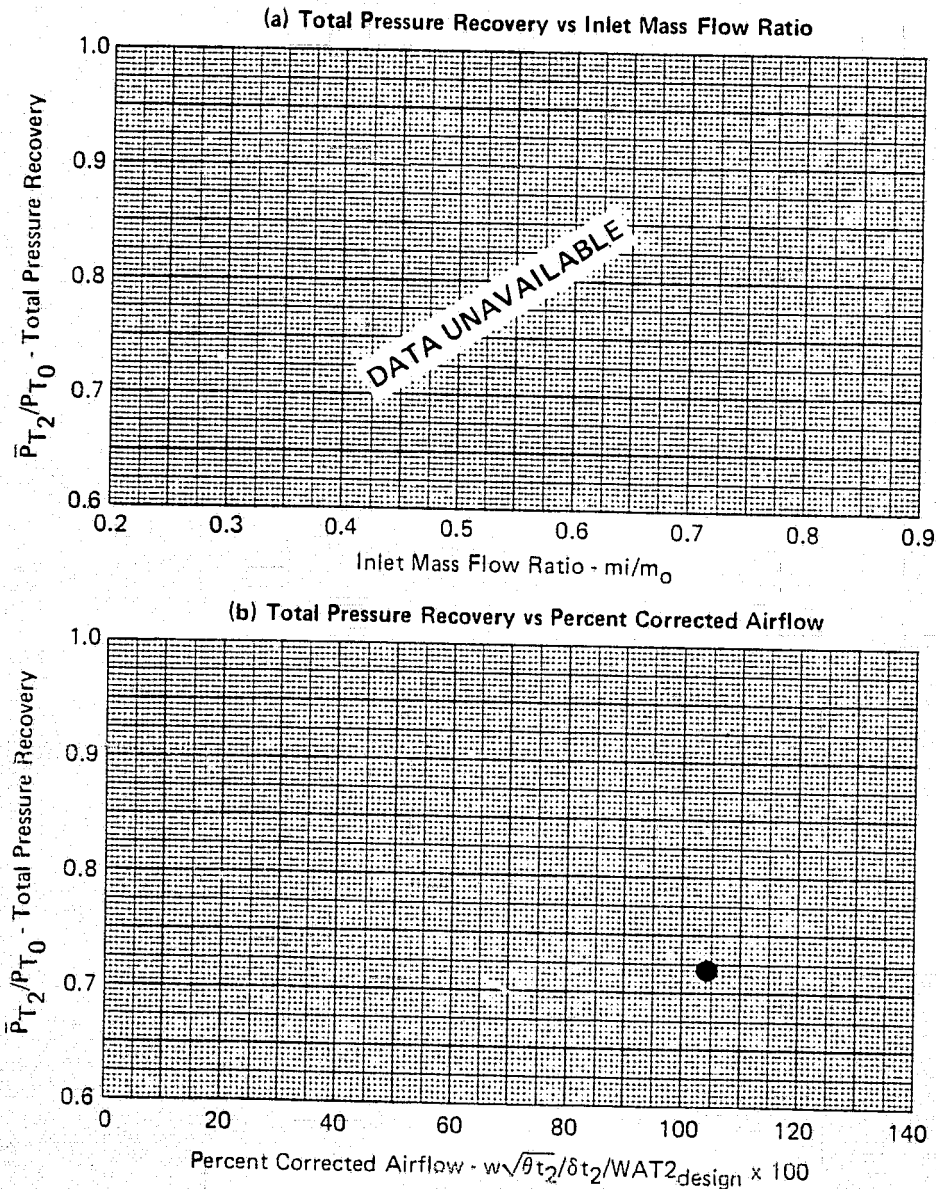
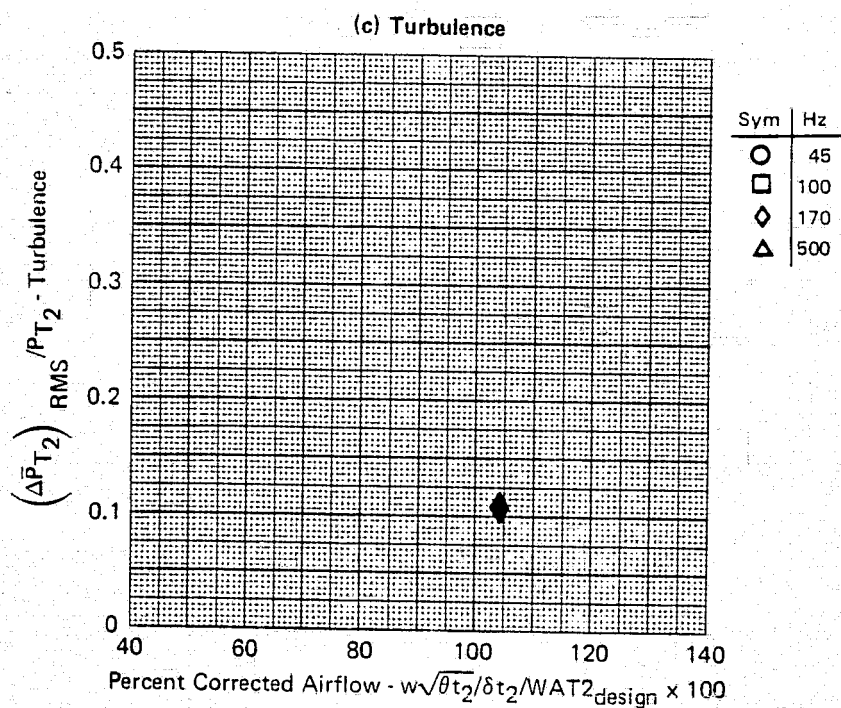


FIGURE G-4
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69$, $\alpha = 11.5$, $\beta = 1.0$, $WAT2 = 104.2\%$

GP77-0658-1

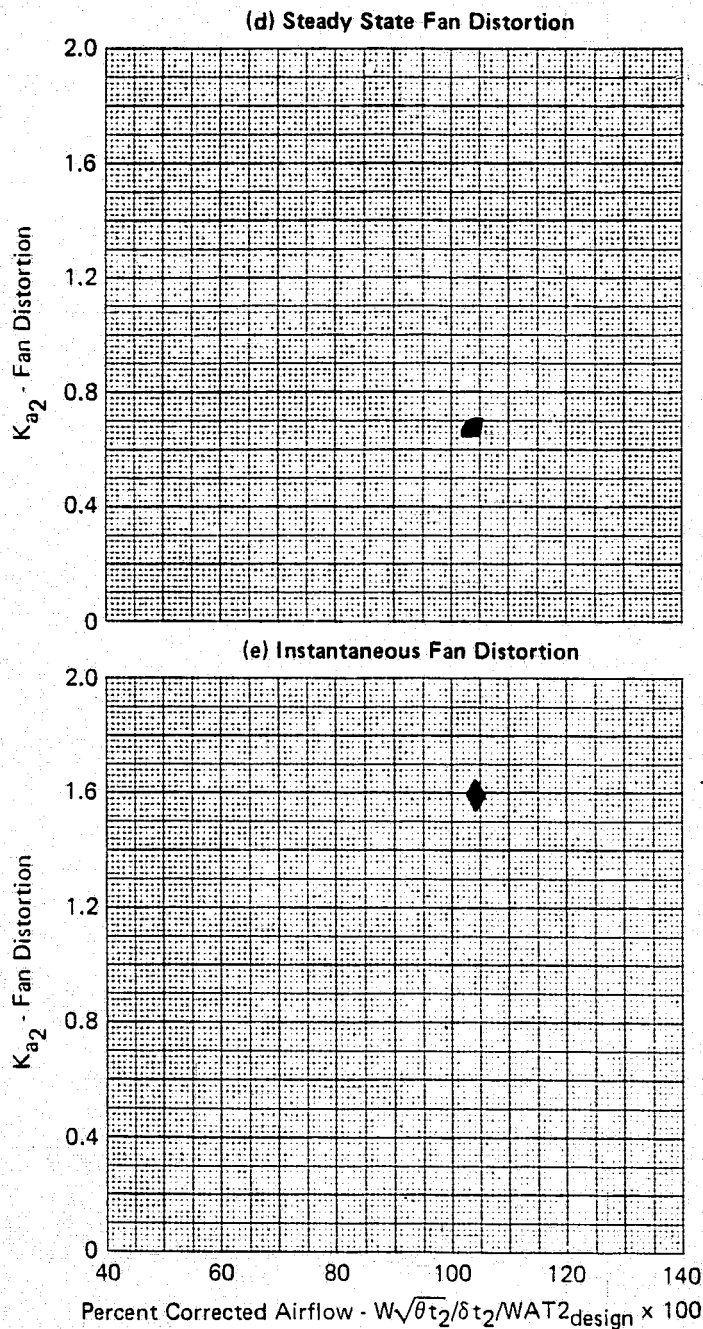
FLIGHT - NASA Data Study
 Part/Point - 417/2, Ident 4
 RHO DELTA3 BYPASS CIVV
 7.0 26.5 0.0 -5.00



GP77-0658-5

FIGURE G-4 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69$, $\alpha = 11.5$, $\beta = 1.0$, $WAT2 = 104.2\%$

FLIGHT - NASA Data Study
 Part/Point - 417/2, Ident 4
 RHO DELTA3 BYPASS CIVV
 7.0 26.5 0.0 -5.00



GP77-0658-3

FIGURE G-4 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69, \alpha = 11.5, \beta = 1.0, WAT2 = 104.2 \%$

FLIGHT - NASA Data Study
 Part/Point - 417/2, Ident 4
 RHO DELTA3 BYPASS CIVV
 7.0 26.5 0.0 -5.00

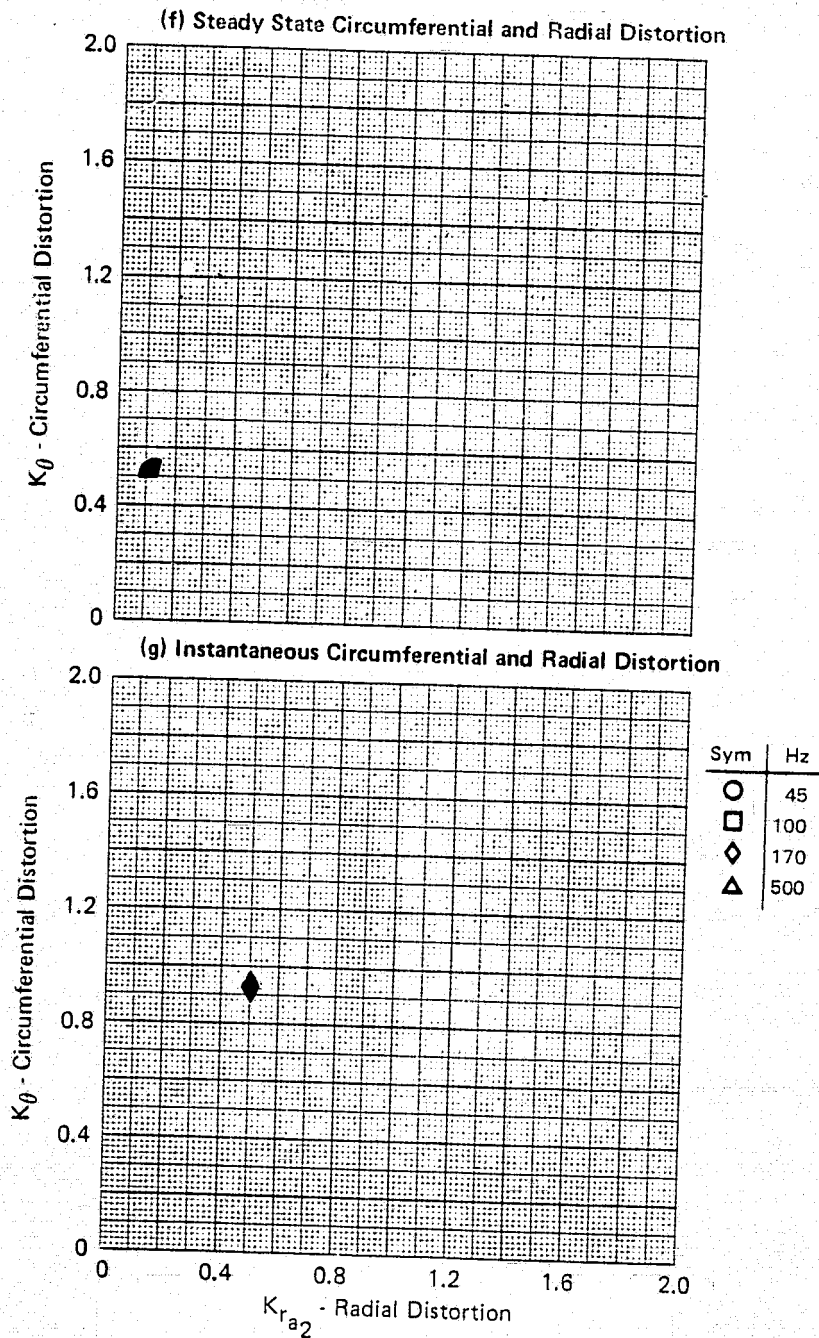
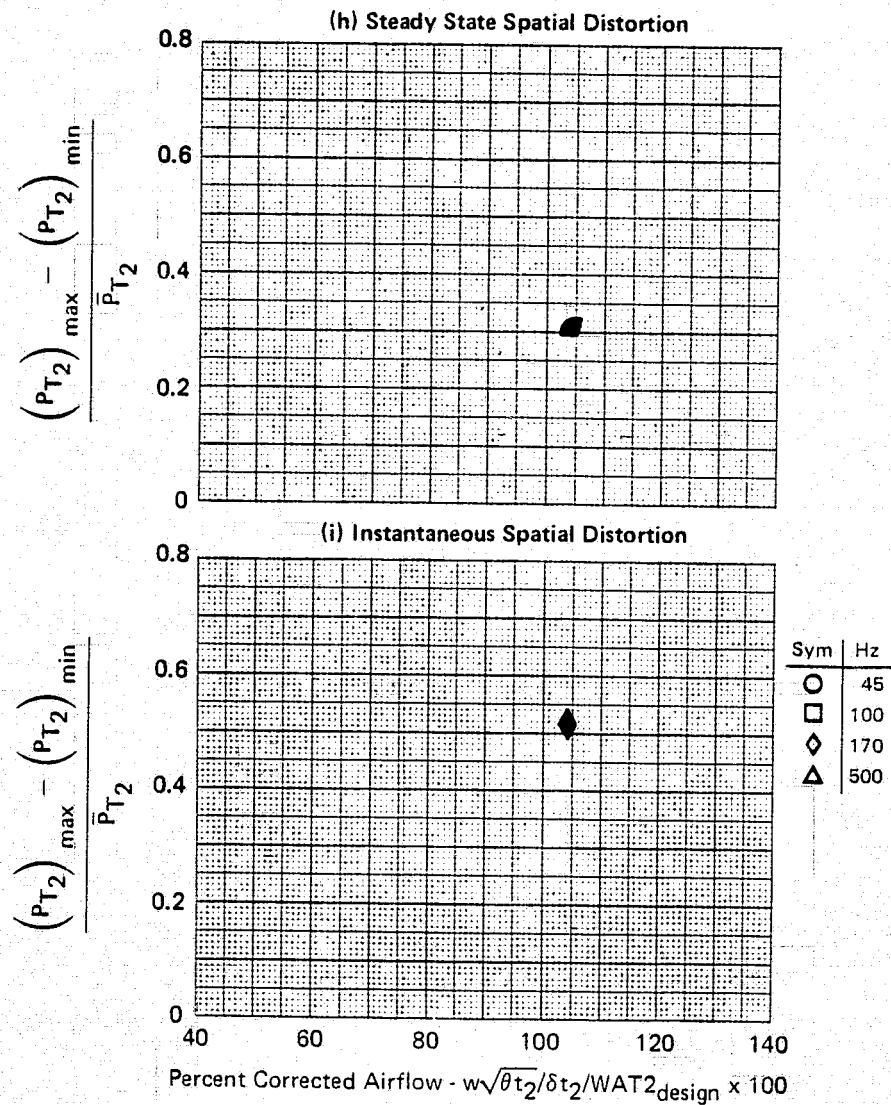


FIGURE G-4 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69$, $\alpha = 11.5$, $\beta = 1.0$, WAT2 = 104.2 %

GP77-0658-2

FLIGHT - NASA Data Study
 Part/Point - 417/2, Ident 4
 RHO DELTA3 BYPASS CIVV
 7.0 26.5 0.0 -5.00



GP77-0658-4

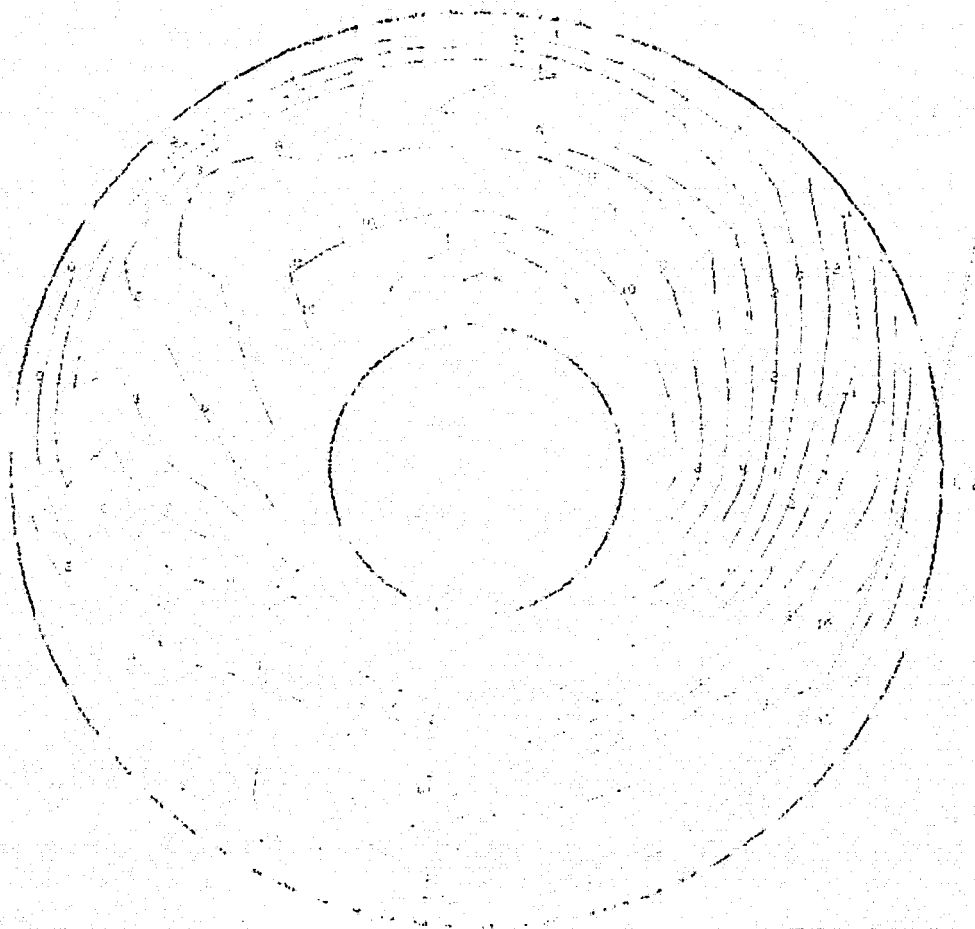
FIGURE G-4 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.69, \alpha = 11.5, \beta = 1.0, WAT2 = 104.2\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/2 IDENT. 4
THE SEGMENT START TIME WAS AT 17:10:21.160

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.69	11.5	1.0	15266(50084)	7.0	26.5	0.0	104.2%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	K0SP	D2
11.43(1.658)	1.0	.5206	.1085	.1422	.6687	.4495	—	.3061

4 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 11.43 kPa (1.658 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

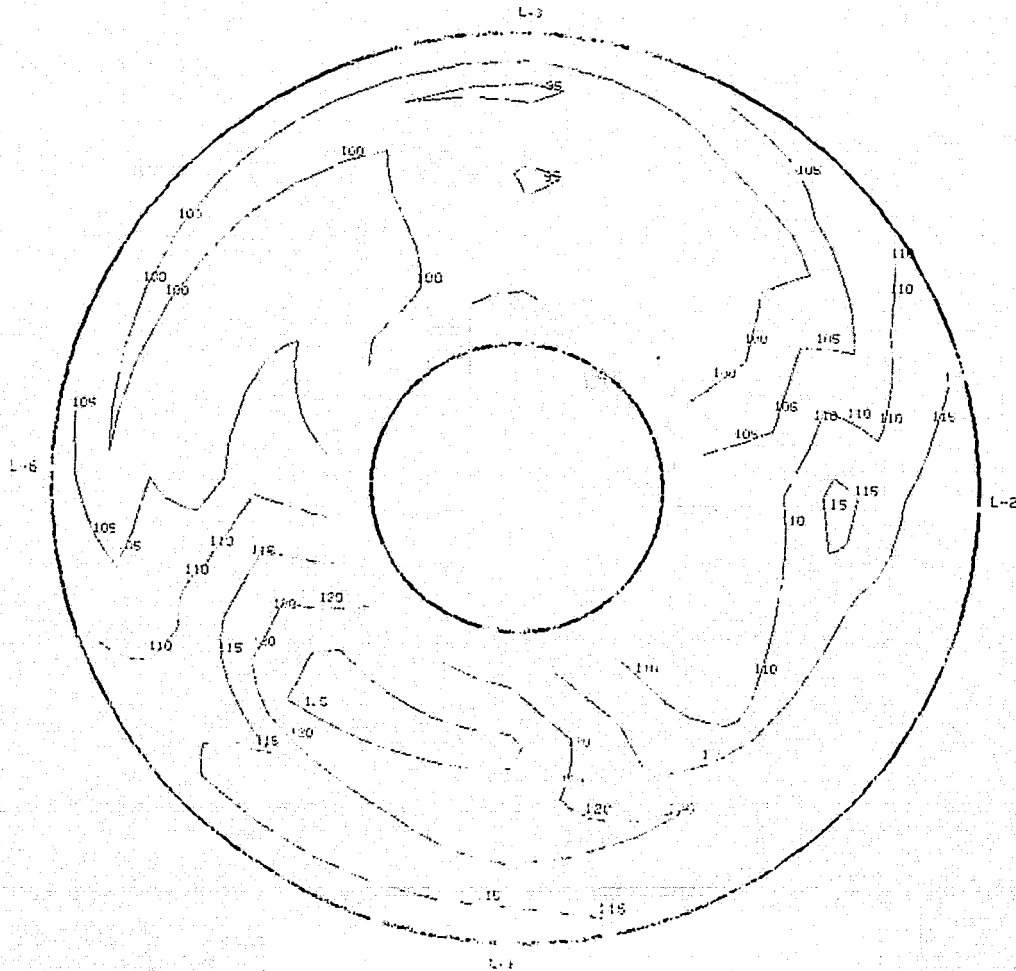
FIGURE G-4 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .69$, $\alpha = 11.5$, $\beta = 1.0$, $WAT2 = 104.2\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/2 IDENT. 4
THE SEGMENT START TIME WAS AT 17:10:21.180

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.69	11.5	1.0	15268(50084)	7.0	28.5	0.0	104.2%	-5.00

4(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.1087

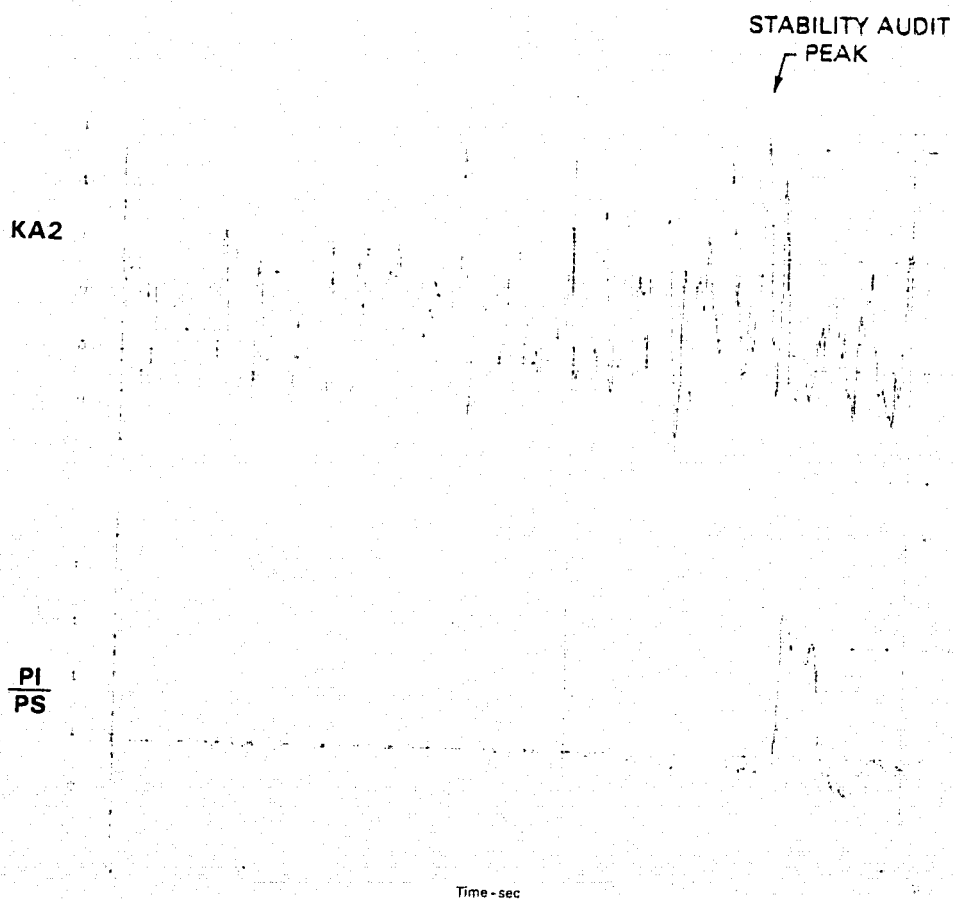
FIGURE G-4 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .69$, $\alpha = 11.5$, $\beta = 1.0$, $WAT2 = 104.2\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/2 IDENT. 4
THE SEGMENT START TIME WAS AT 17:10:21.160

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.69	11.5	1.0	15262(50072)	7.0	26.5	9.0	104.2%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
10.89(1.58)	.9530	.9317	.4993	.6546	1.5864	.6585	.8005	.5161

4 (I) Time History Plots 170 Hz



STABILITY AUDIT PEAK AT TIME = .57233 SECONDS

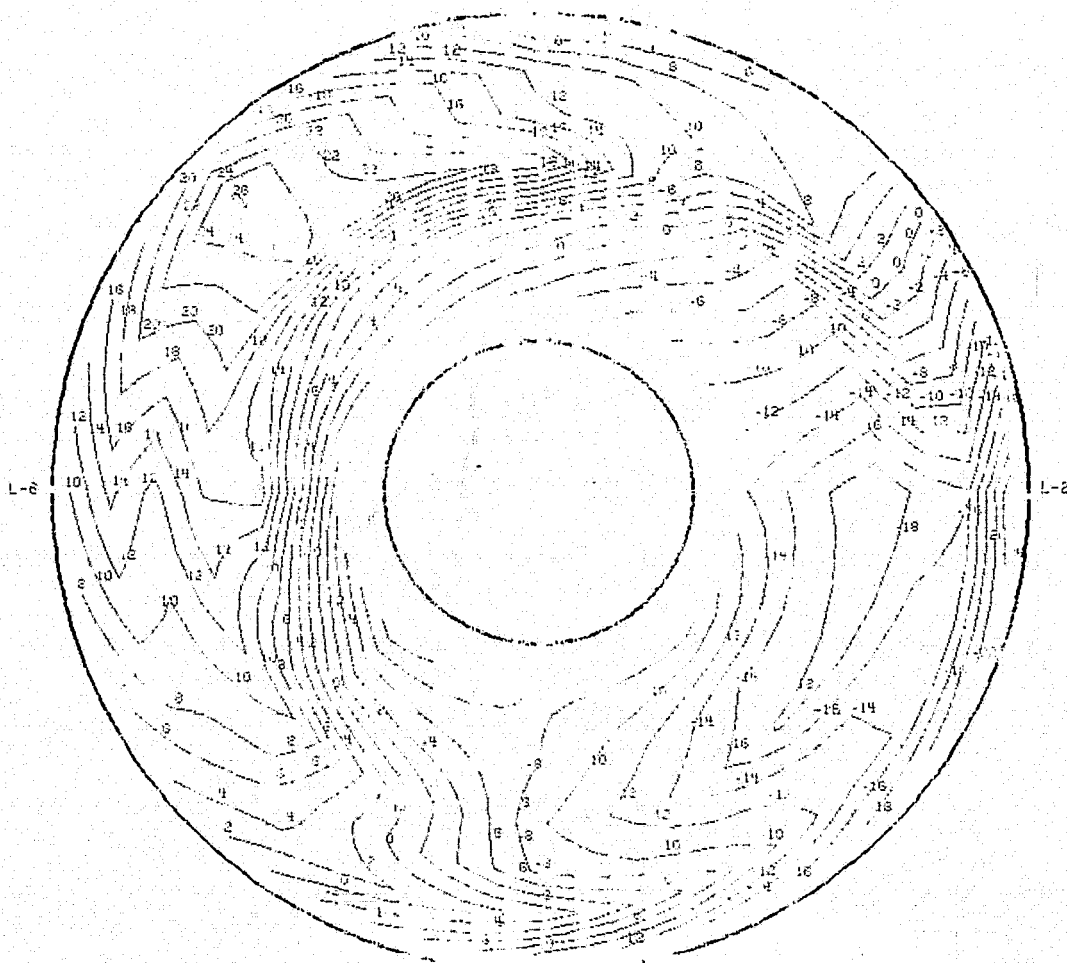
FIGURE G-4 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .69$, $\alpha = 11.5$, $\beta = 1.0$, WAT2 = 104.2 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/2 IDENT.4
THE SEGMENT START TIME WAS AT 17:10:21.160

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.69	11.5	1.0	15262(50072)	7.0	26.5	0.0	104.2%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
10.59(1.58)	.9530	.9317	.4993	.6546	1.5864	.6585	.8005	.5161

4(m) Instantaneous Total Pressure Contour at Peak Instantaneous Ka_2
170 Hz

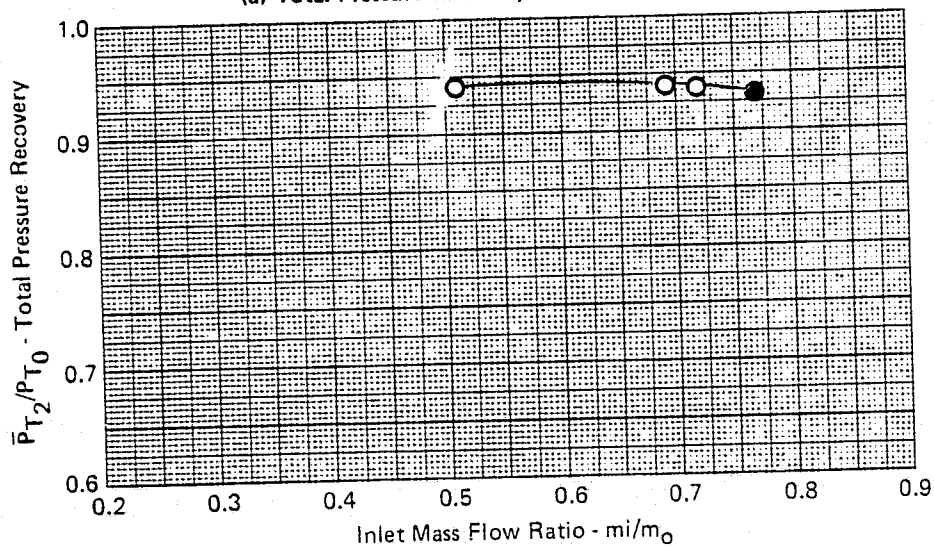


MEAN FACE PRESSURE = 10.89 kPa (1.580 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.57233 SECONDS

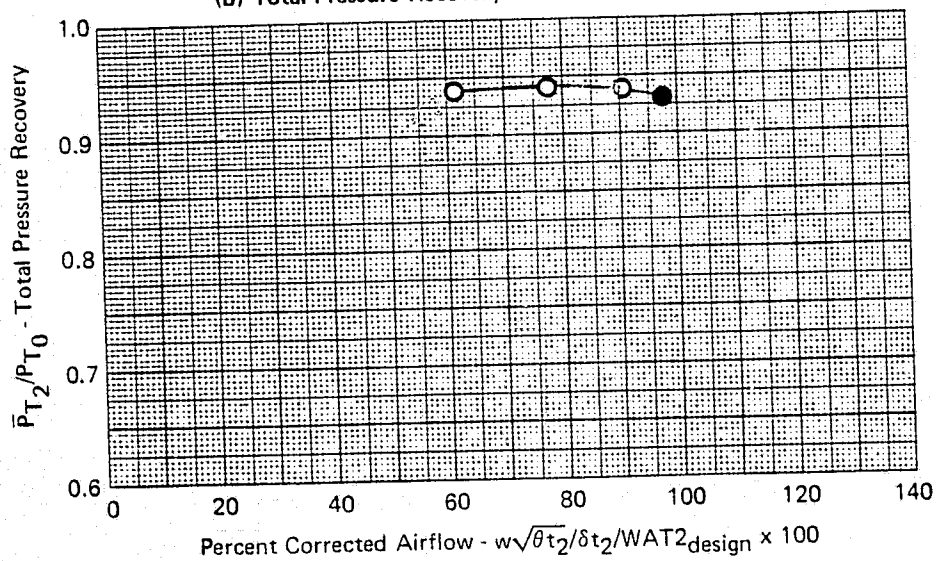
FIGURE G-4 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .69$, $\alpha = 11.5$, $\beta = 1.0$, WAT2 = 104.2 %

SERIES VII - NASA Data Study
 Part/Point - 164/1, Ident 5
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -11.7

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



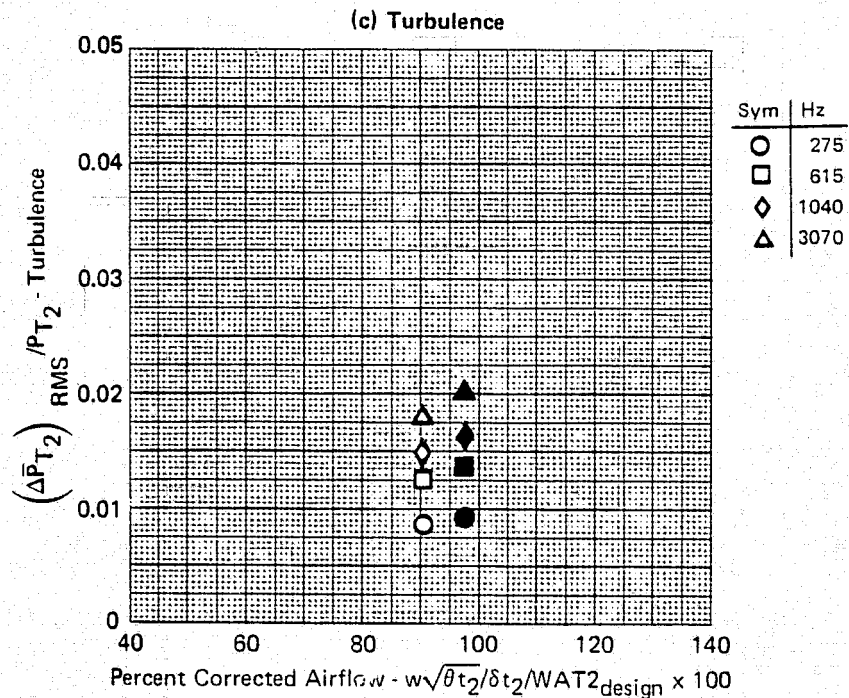
(b) Total Pressure Recovery vs Percent Corrected Airflow



GP77-0658-1

FIGURE G-5
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60$, $\alpha = -10$, $\beta = 10$, $WAT2 = 97.2\%$

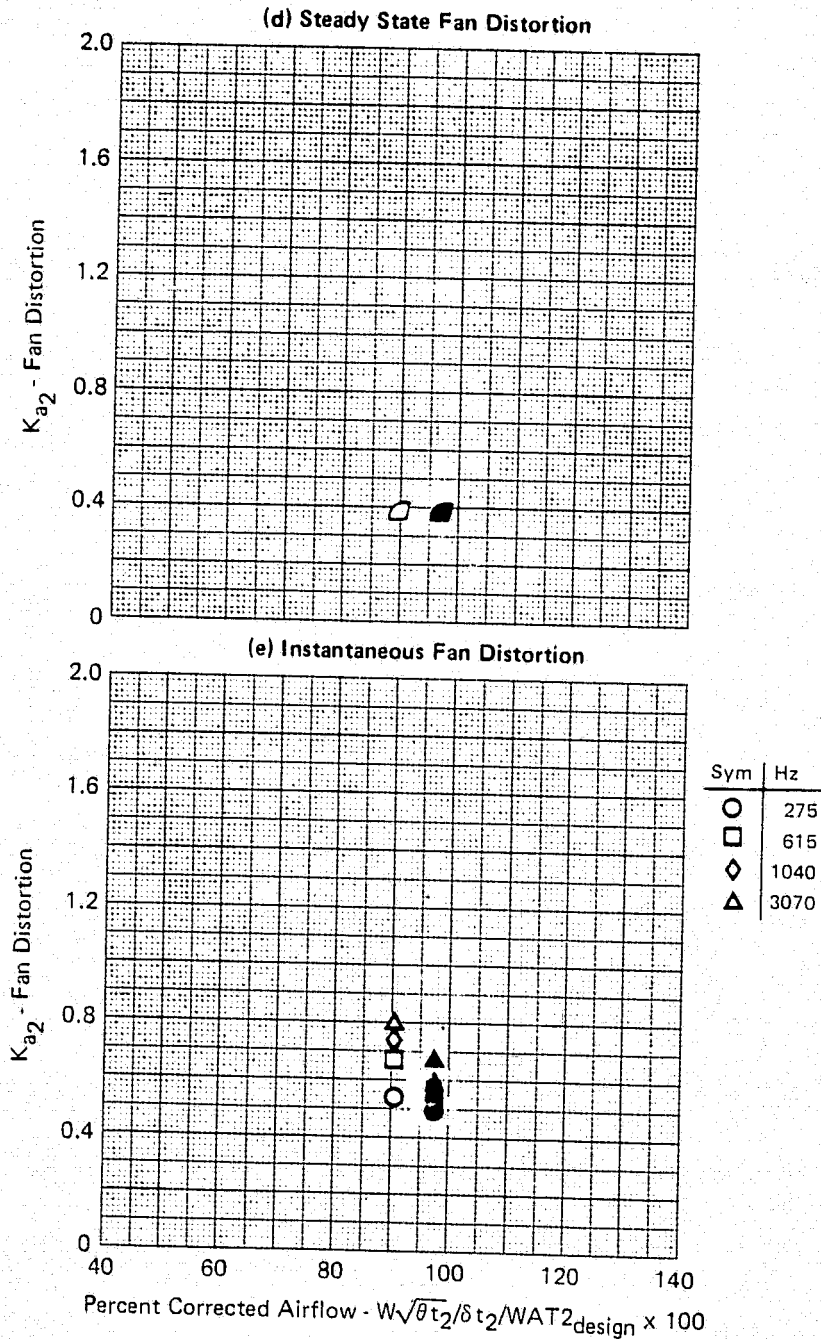
SERIES VII - NASA Data Study
 Part/Point - 164/1, Ident 5
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -11.7



GP77-0658-5

FIGURE G-5 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.60$, $\alpha = -10$, $\beta = 10$, $WAT2 = 97.2\%$

SERIES VII - NASA Data Study
 Part/Point - 164/1, Ident 5
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -11.7



GP77-0658-3

FIGURE G-5 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.60$, $\alpha = -10$, $\beta = 10$, $WAT2 = 97.2\%$

SERIES VII - NASA Data Study
 Part/Point - 164/1, Ident 5
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -11.7

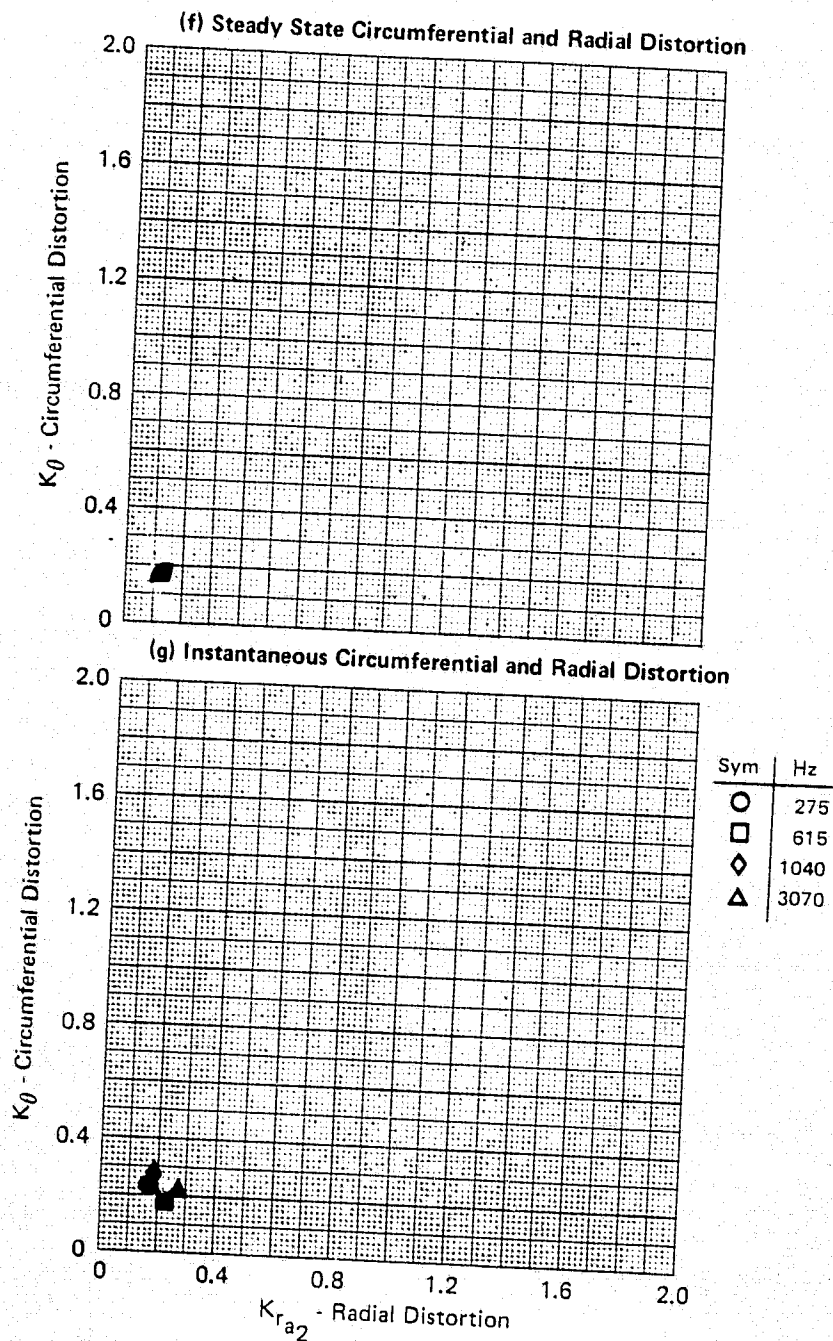
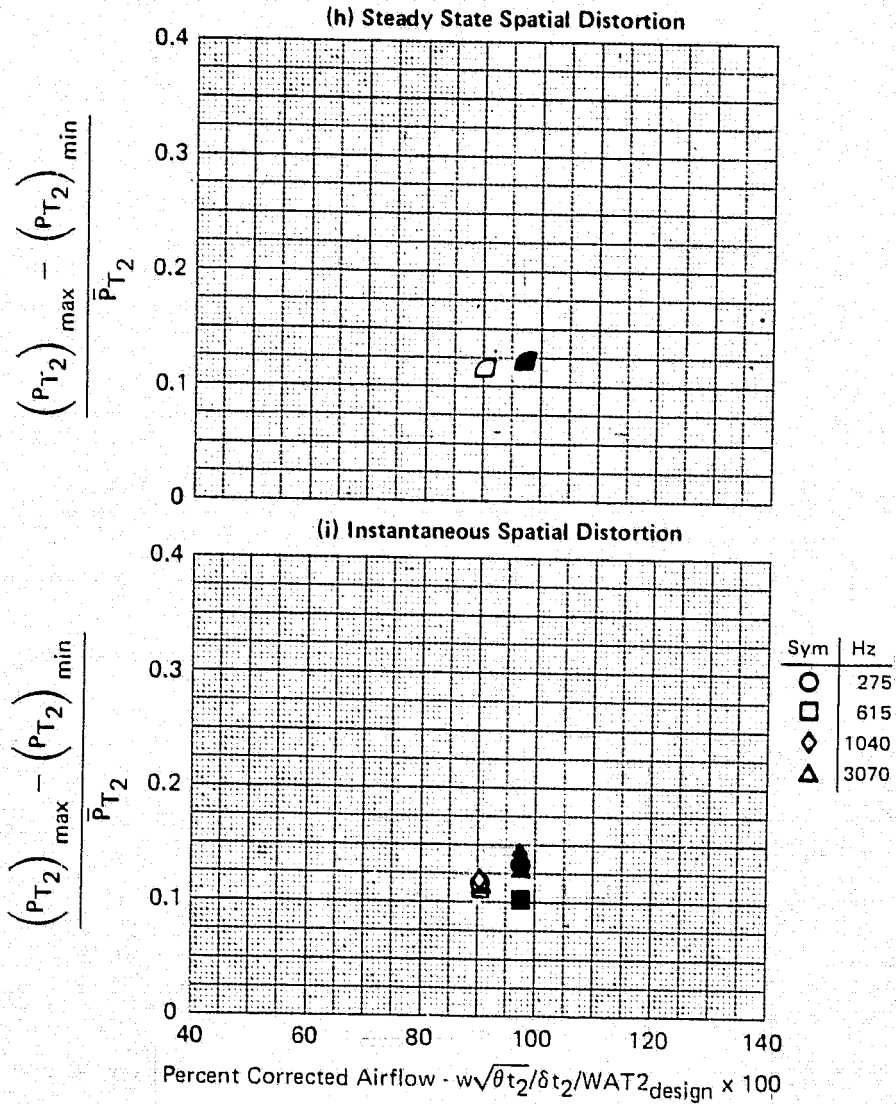


FIGURE G-5 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60$, $\alpha = -10$, $\beta = 10$, WAT2 = 97.2 %

GP77-0658-2

SERIES VII - NASA Data Study
 Part./Point - 164/1, Ident 5
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -11.7



GP77-0658-4

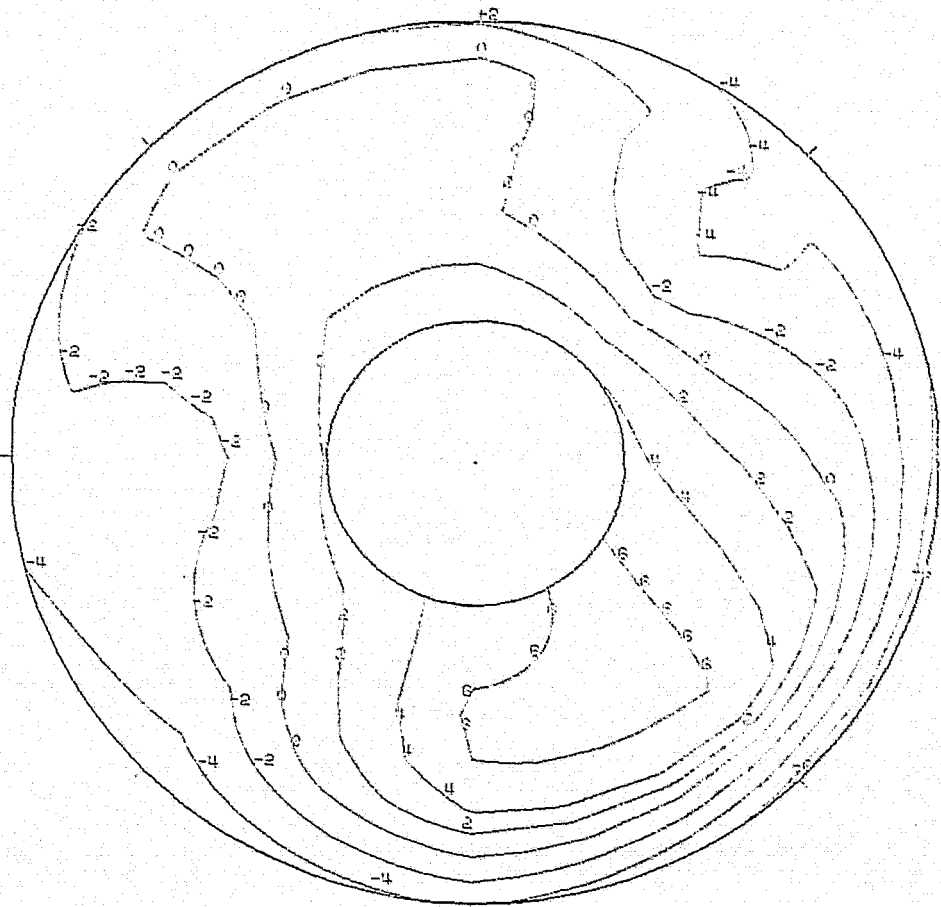
FIGURE G-5 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60, \alpha = -10, \beta = 10, WAT2 = 97.2 \%$

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164/1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.042

MACH	ALPHA	BETA	BWD	DELTA2	EXPASS	WAT2	QIVL
0.6	-10	10	-10	10.6	0.0	97.2%	0.117
76.37 (11.076)	0.000	0.170	0.125	0.200	0.170	0.182	0.130

5 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 76.37 kPa (11.076 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

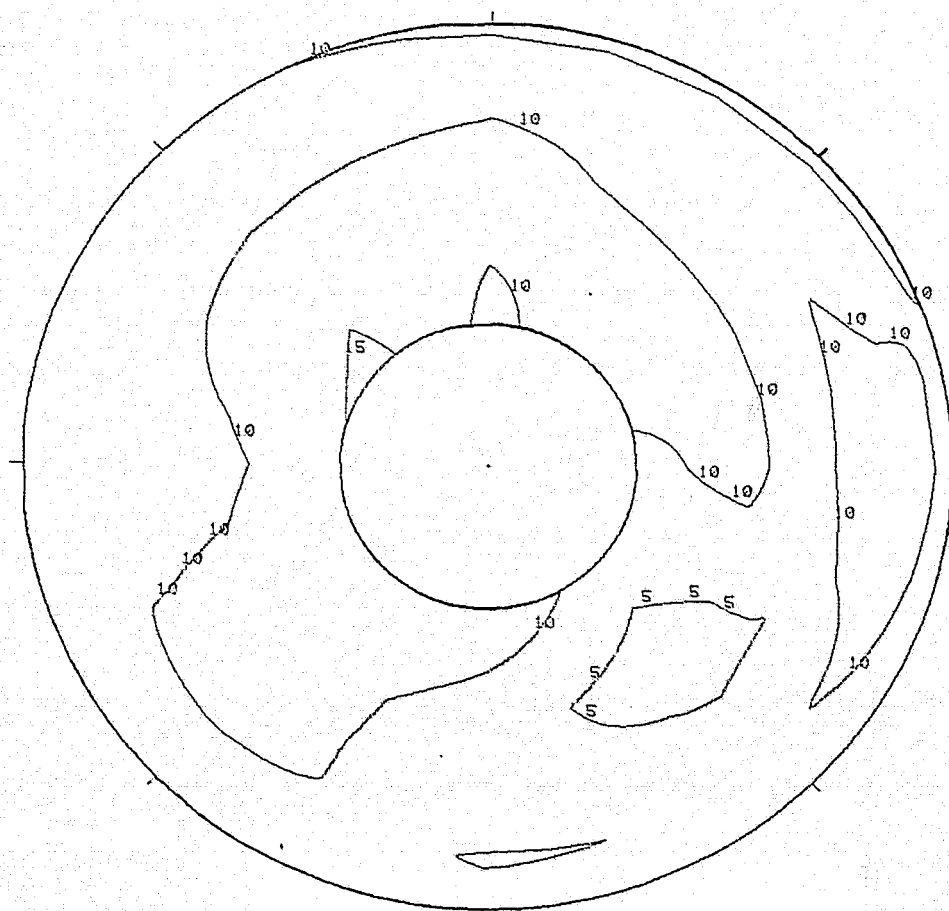
FIGURE G-5 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 97.2 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.046

MACH	ALPHA	BETA	PHI	DELTA2	BYPASS	WAT2	CIVV
0.6	-10	10	-3.0	10.8	0.0	97.2%	-11.7

5(k) Turbulence Contour 275 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00926

FIGURE G-5 (Continued)

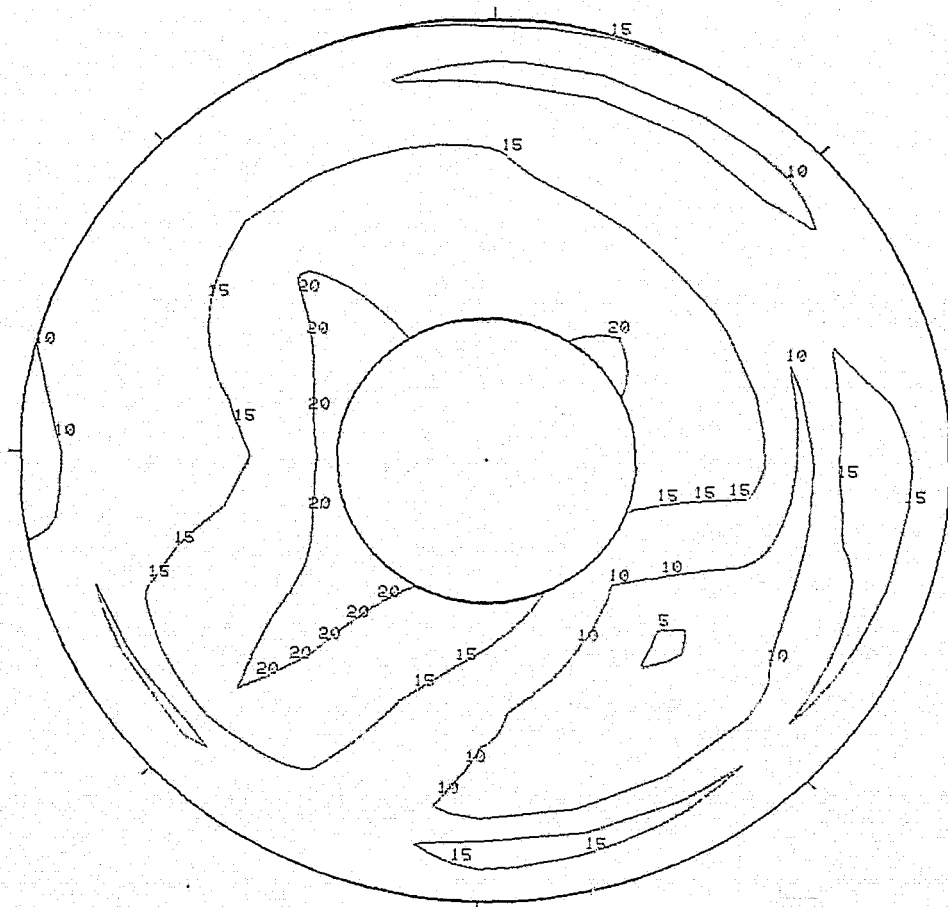
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 97.2\%$

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.045

MACH 0.6	ALPHA -10	BETA 10	PHO -3.0	DELTA3 10.8	BYPASS 0.0	WAT2 97.2%	GIVV -11.7
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5 (I) Turbulence Contour 615 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01371

FIGURE G-5 (Continued)

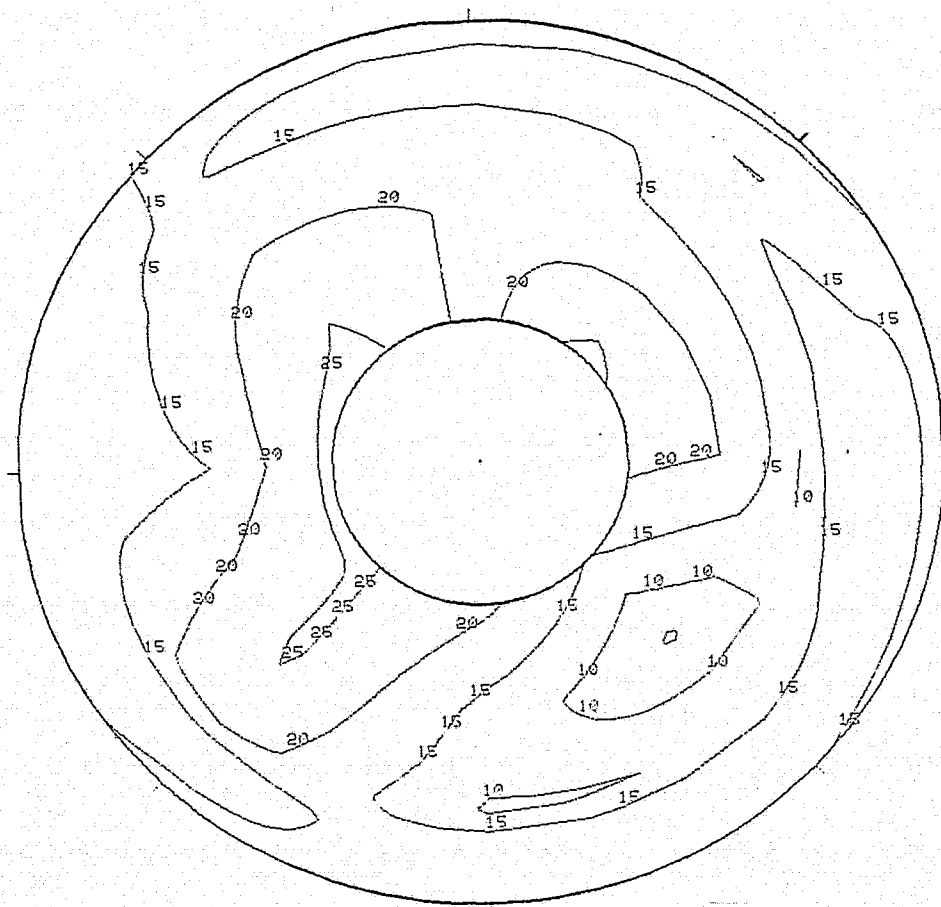
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 97.2\%$

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.042

MACH	ALPHA	BETA	RHO	DELTA2	BYPASS	WAT2	CIVV
0.6	-10	10	-3.0	10.6	0.0	97.2%	-11.7

5(m)Turbulence Contour 1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01625

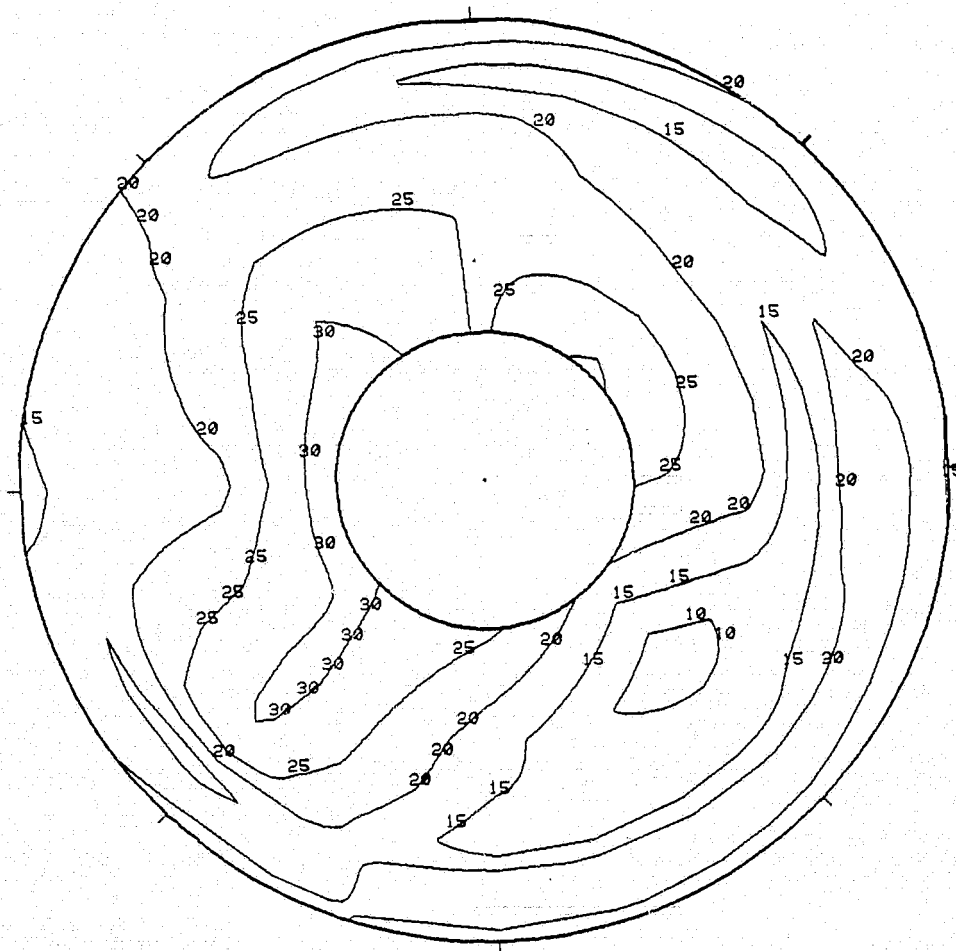
FIGURE G-5 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 97.2 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.044

MACH 0.6	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 97.2%	CIVV -11.7
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5 (n) Turbulence Contour 3070 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02020

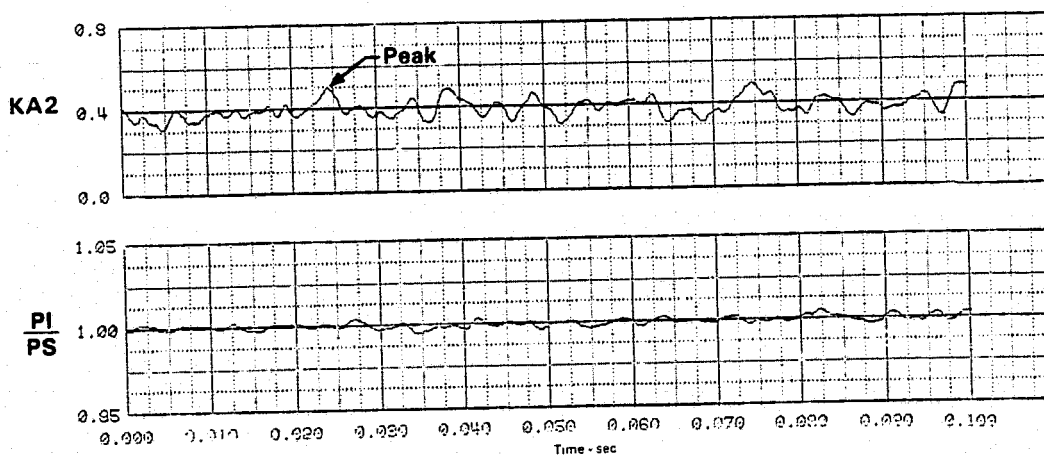
FIGURE G-5 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 97.2 %

SERIES VII - KOSR DATA STUDY

DATA PART/POINT 184 / 1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.045

WAT2 97.2%	ALPHA -10	BETA 10	PHI -3.0	DELTA2 13.8	BYPASS 0.0	WAT2 97.2%	CIVV -11.7
76.36 (11.075)	PI/PS 0.999	KTHETA 0.000	K002 0.112	K003 0.127	K02 0.150	K03 0.223	K032 0.127
							0.132

5(o) Time History Plots
275 Hz



PEAK AT TIME = 0.024255 SECONDS

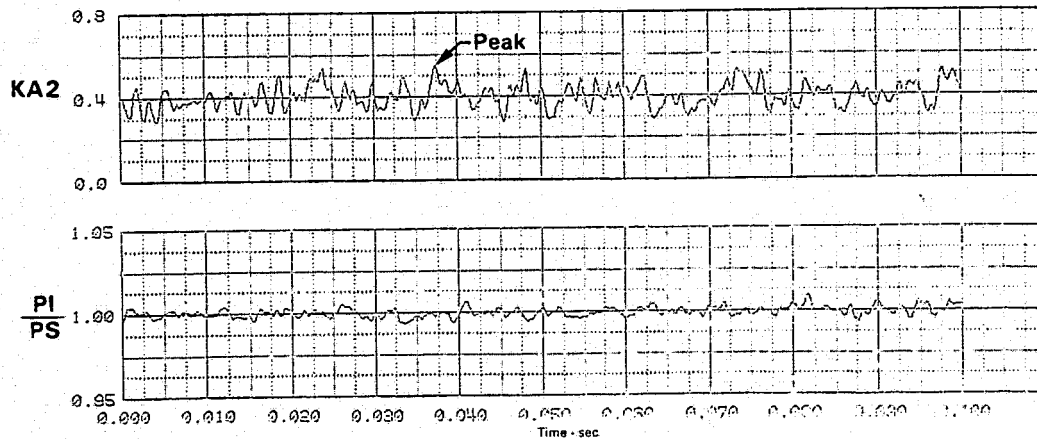
FIGURE G-5 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 97.2%

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.045

MACH 0.6	ALPHA -10	BETA 10	PHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 97.2%	CIVV -11.7
PI 76.26 (11.061)	PI/PS 0.999	KTHETA 0.120	KPA2 0.221	BKPA2 0.363	KQ2 0.643	KQ3 0.259	KQSP 0.234
							O2 0.103

5(p) Time History Plots 615 Hz



PEAK AT TIME = 0.037455 SECONDS

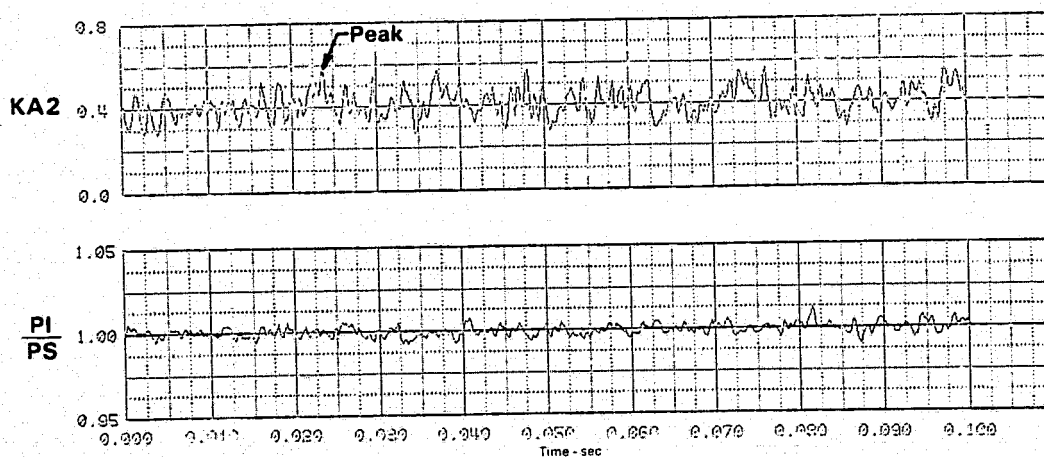
FIGURE G-5 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 97.2\%$

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.042

MACH 0.6	ALPHA -10	BETA 10	RHO -3.3	DELTA2 10.6	BYPASS 0.0	WAT2 97.2%	C1V1 -11.7
P1 76.37 (11.077)	PI/PS 1.000	KTHETA 0.270	KPA2 0.132	KKPA2 0.291	KAS 0.572	KC2 0.274	KOSP 0.332
							D2 0.139

5(q) Time History Plots 1040 Hz



PEAK AT TIME = 0.023595 SECONDS

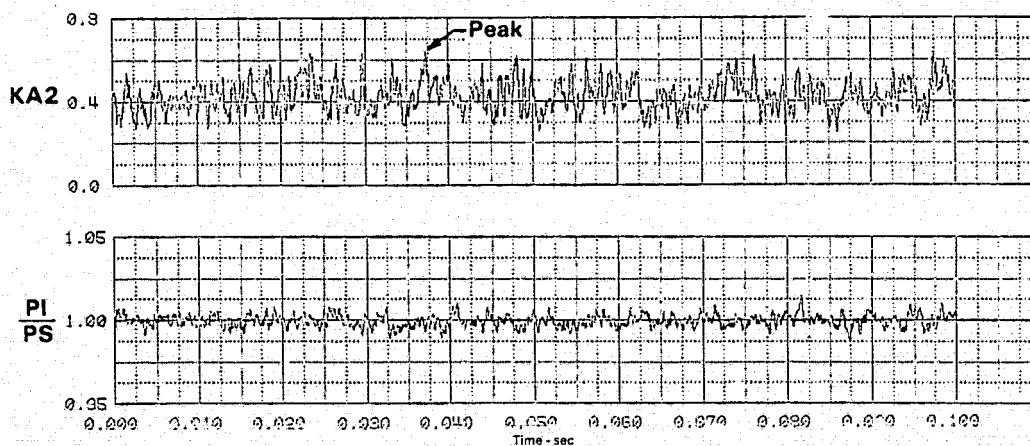
FIGURE G-5 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 97.2\%$

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.044

MACH 0.6	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 97.2%	CIVV -11.7
P1 76.41 (11.082)	PI/PS 1.091	KTHETA 0.220	KRA2 0.267	BKRA2 0.445	KA2 0.655	KC2 0.240	KOSP 0.288
							D2 0.127

5(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.037260 SECONDS

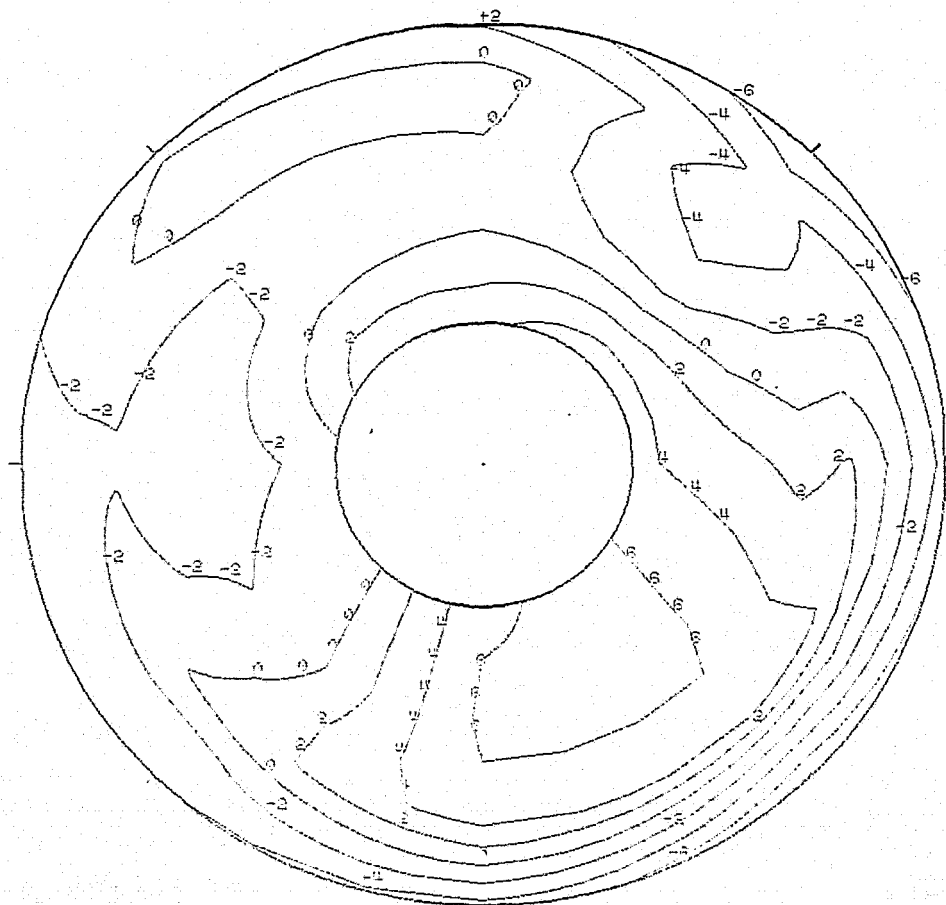
FIGURE G-5 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 97.2\%$

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.646

MACH 0.6	ALPHA -10	BETA 10	PHI -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 97.2%	CIVV -11.7
PI 76.36 (11.075)	PI/PS 1.000	KTHETA 0.230	KPA2 0.162	BKPA2 0.270	KQ2 0.500	KC2 0.323	KOSP 0.279
							D2 0.132

**5(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
275 Hz**



MEAN FACE PRESSURE = 76.36 kPa (11.075 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.024255 SECONDS

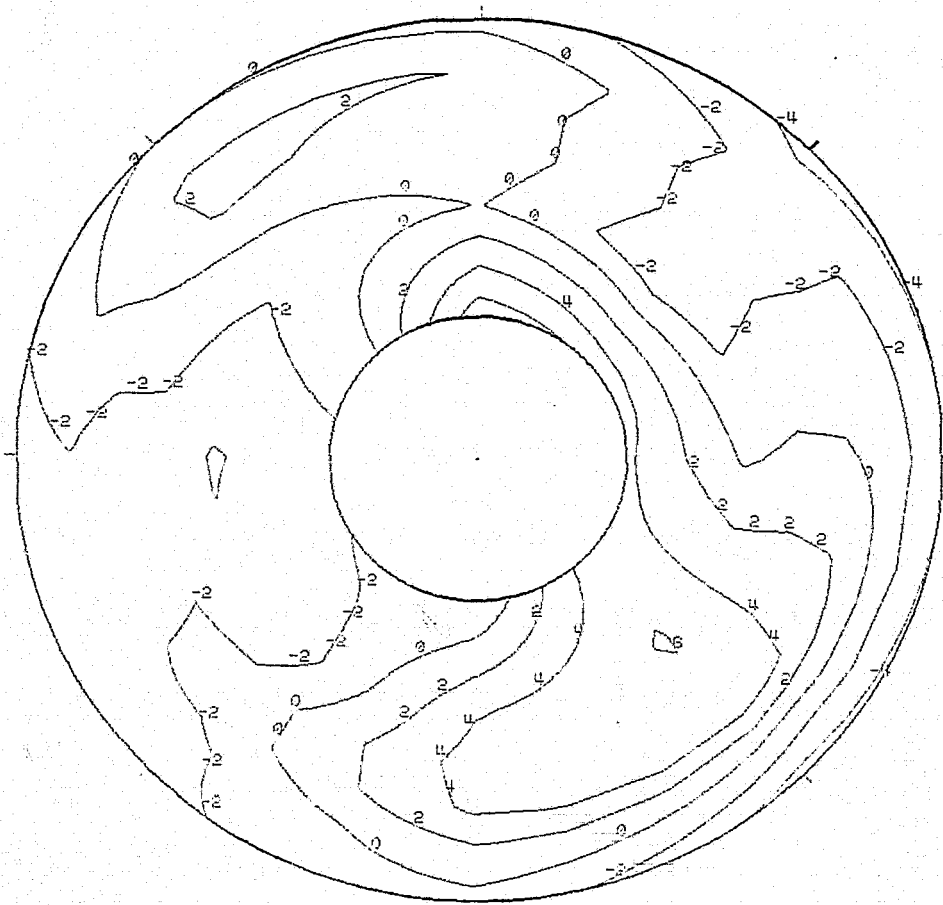
FIGURE G-5 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 97.2$ %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.045

MACH 0.6	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 97.2%	CIVV -11.7
P1 76.26 (11.061)	P1/PS 0.999	KTHETA 0.190	KPA2 0.221	BKPA2 0.369	KA2 0.548	KC2 0.269	KOSP 0.234
							D2 0.103

**5(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
615 Hz**



MEAN FACE PRESSURE = 76.26 kPa (11.061 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.037455 SECONDS

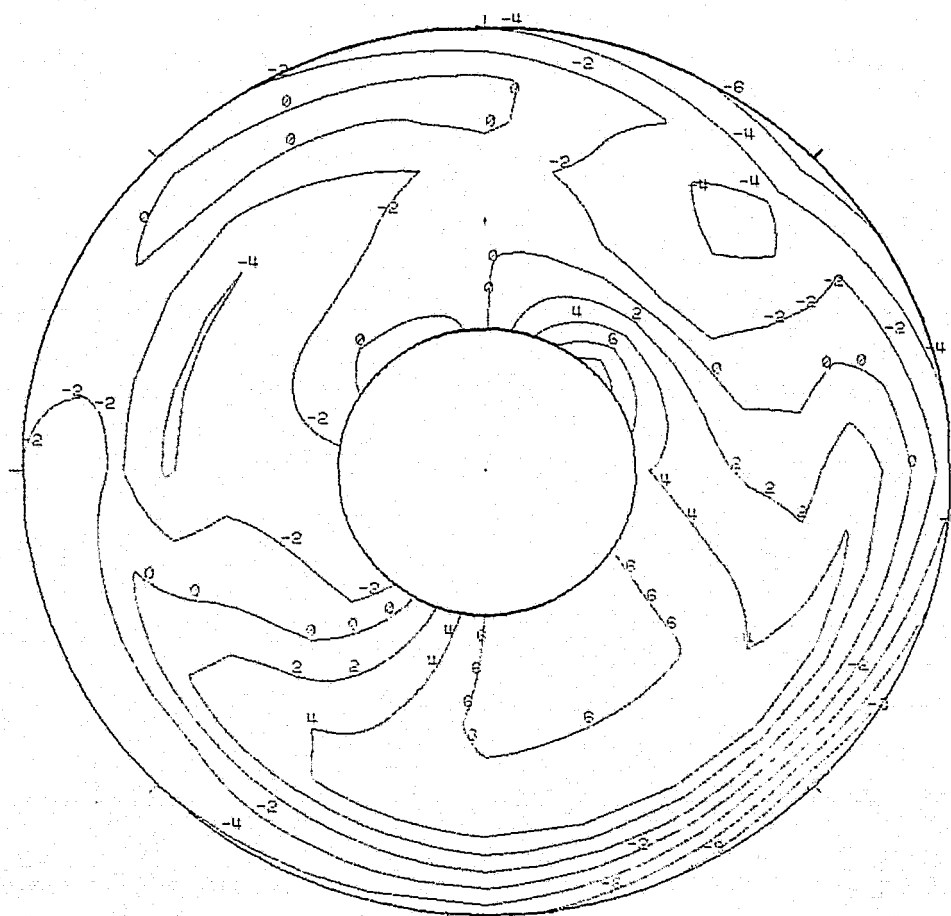
FIGURE G-5 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 97.2 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.042

MACH 0.6	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 97.2%	CIVV -11.7
PI 76.37 (11.077)	PI/PS 1.000	KTHETA 0.270	KRA2 0.192	BKRA2 0.303	KA2 0.572	KC2 0.274	KOSP 0.332
							D2 0.139

5(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 1040 Hz



MEAN FACE PRESSURE = 76.37 kPa (11.077 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.023595 SECONDS

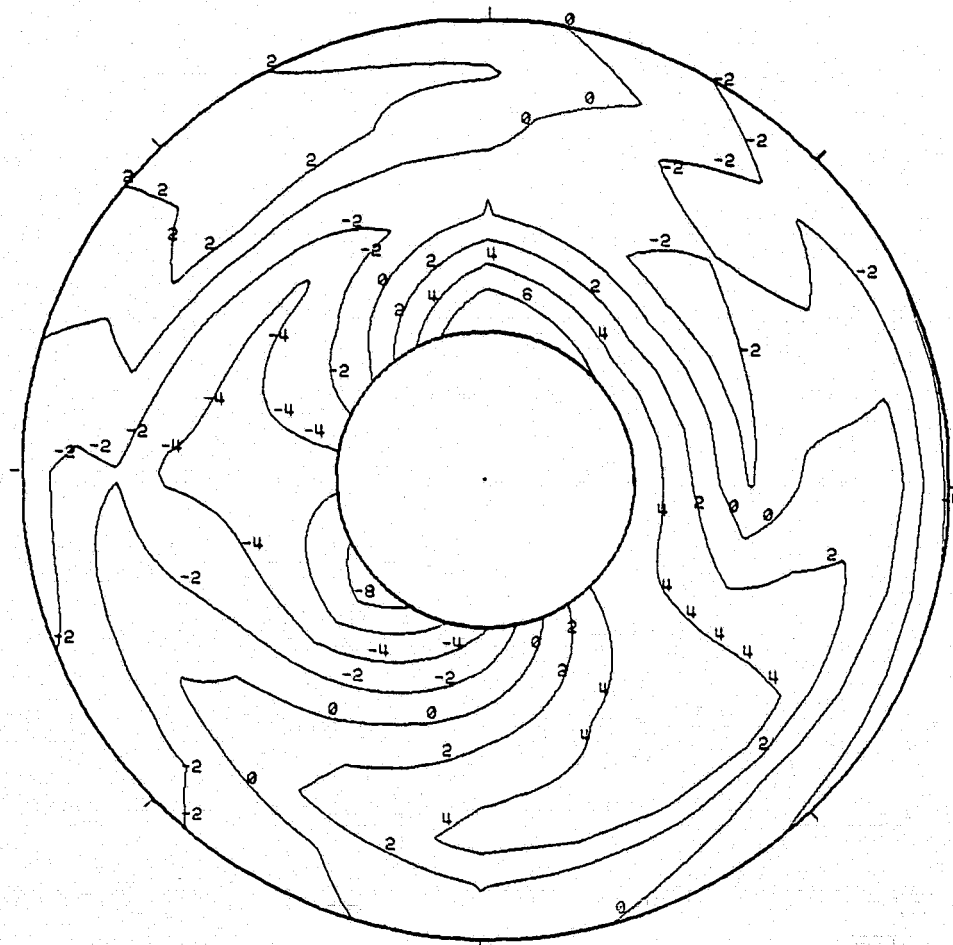
FIGURE G-5 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 97.2 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 1 IDENT. 5
THE SEGMENT START TIME WAS AT 22:11:52.044

MACH 0.6	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 97.2%	CIVV -11.7
P1 76.41 (11.082)	P1/PS 1.001	KTHETA 0.220	KRA2 0.267	BKRA2 0.445	KA2 0.665	KC2 0.240	KOSP 0.298
							D2 0.127

**5(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
3070 Hz**



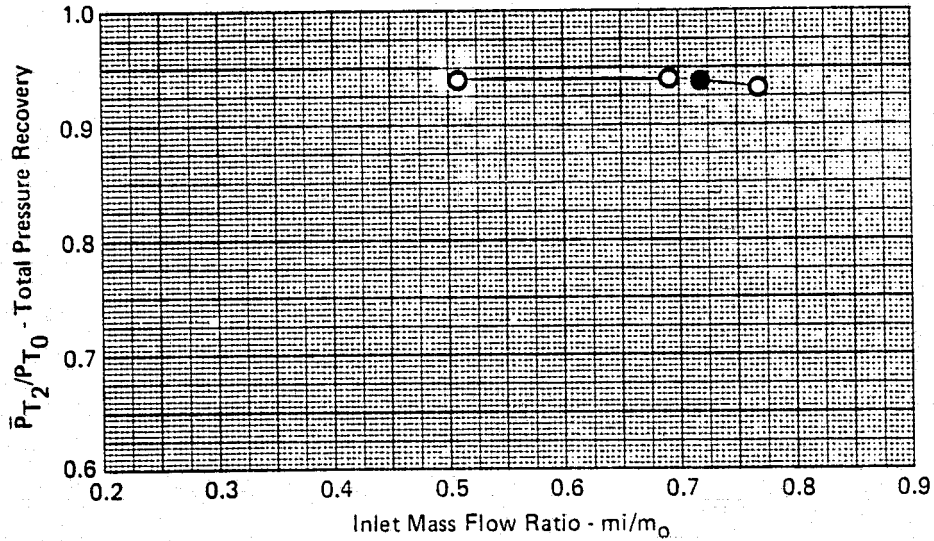
MEAN FACE PRESSURE = 76.41 kPa (11.082 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.037260 SECONDS

**FIGURE G-5 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 97.2 %**

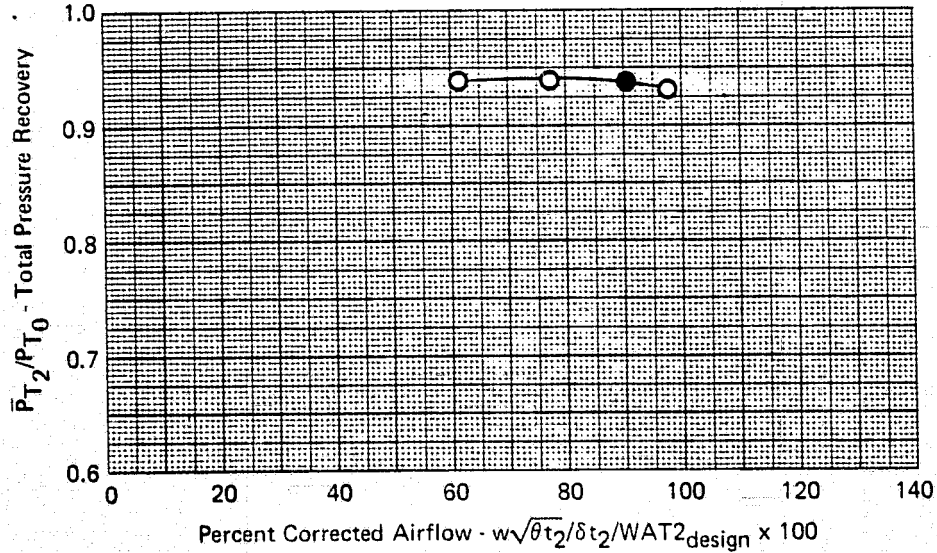
SERIES VII - NASA Data Study
Part/Point - 164/3, Ident 6

RHO	DELTA3	BYPASS	CIVV
-3.0	10.6	0.0	-18.6

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



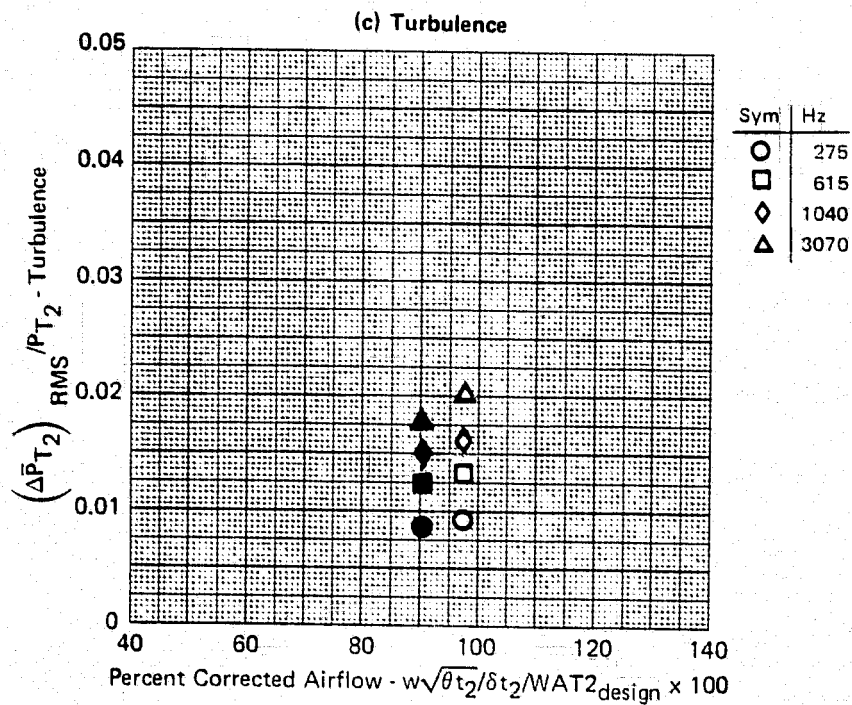
(b) Total Pressure Recovery vs Percent Corrected Airflow



GP77-0658-1

FIGURE G-6
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.60$, $\alpha = -10$, $\beta = 10$, $WAT2 = 90.2\%$

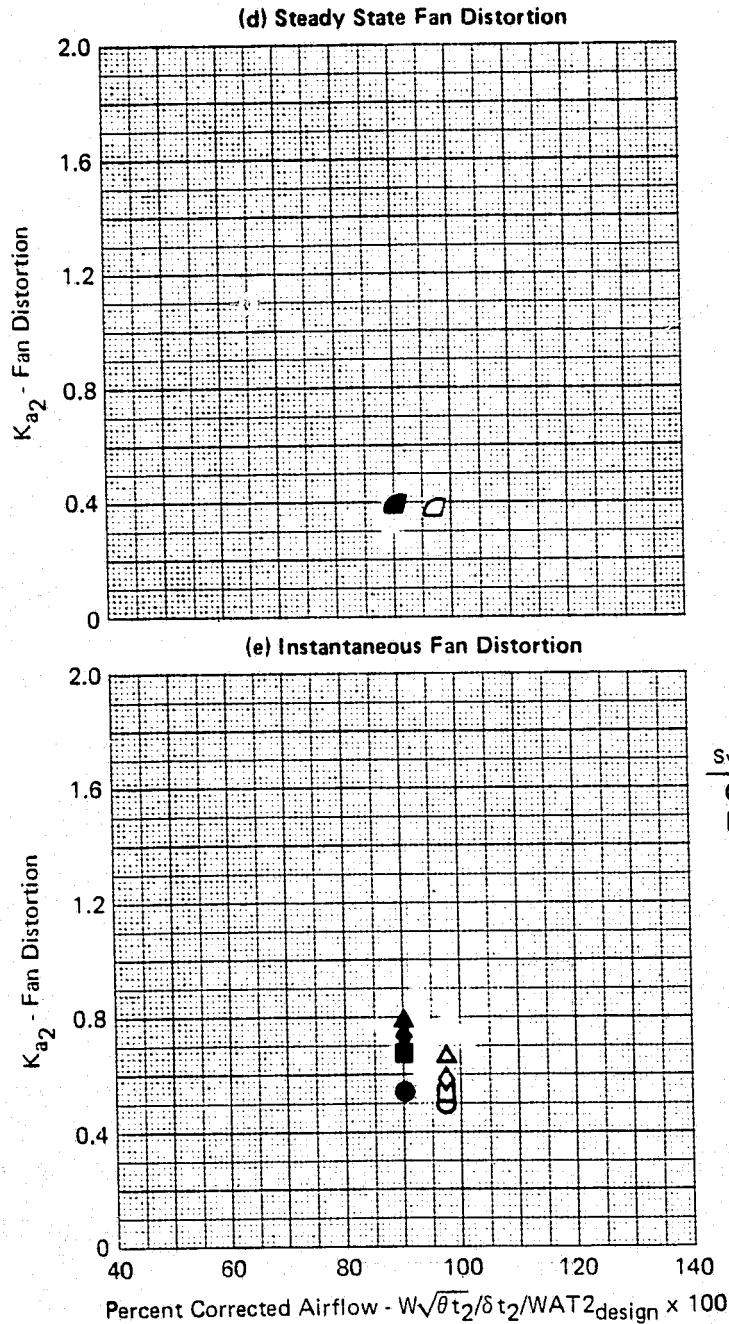
SERIES VII - NASA Data Study
 Part/Point - 164/3, Ident 6
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -18.6



GP77-0658-5

FIGURE G-6 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.60$, $\alpha = -10$, $\beta = 10$, $WAT2 = 90.2\%$

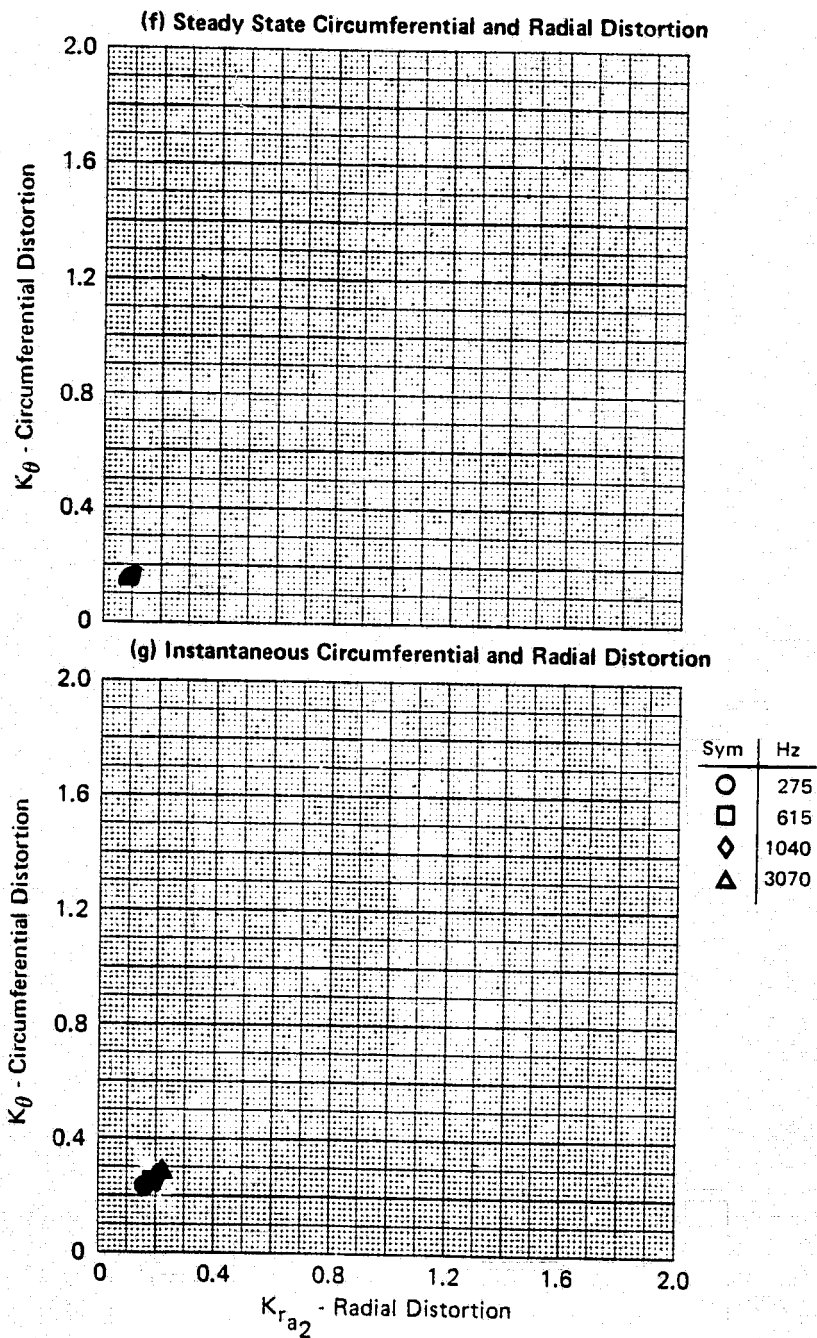
SERIES VII - NASA Data Study
 Part/Point - 164/3, Ident 6
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -18.6



GP77-0658-3

FIGURE G-6 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60$, $\alpha = -10$, $\beta = 10$, $WAT2 = 90.2\%$

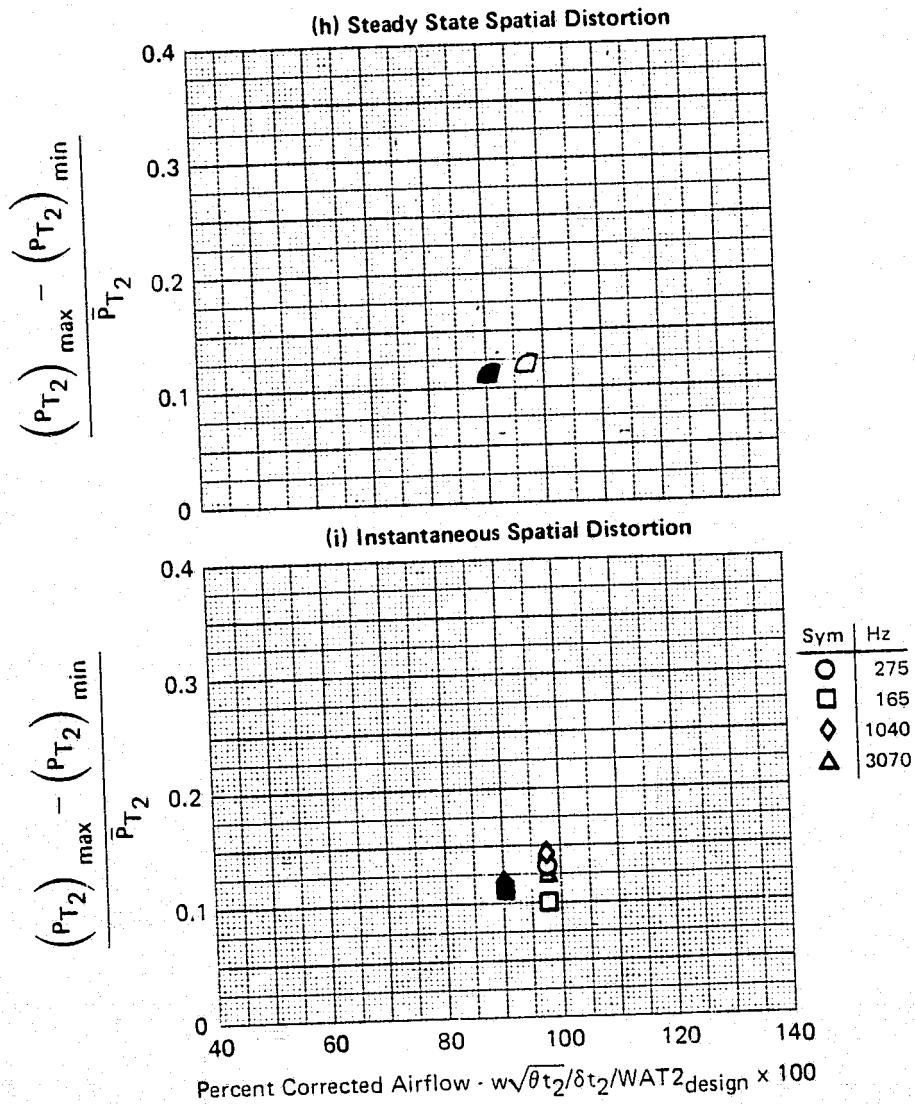
SERIES VII - NASA Data Study
 Part/Point - 164/3, Ident 6
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -18.6



GP77-0658-2

FIGURE G-6 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.60$, $\alpha = -10$, $\beta = 10$, $WAT2 = 90.2\%$

SERIES VII - NASA Data Study
 Part/Point - 164/3, Ident 6
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -18.6



GP77-0659-4

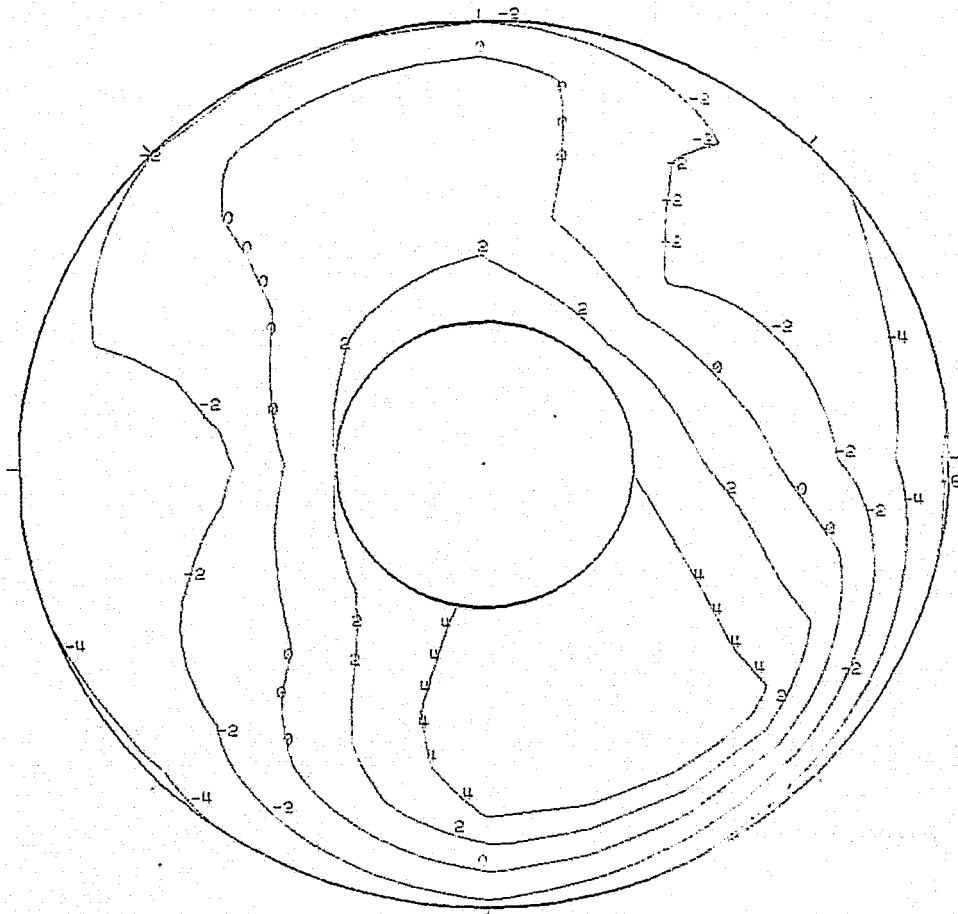
FIGURE G-6 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60, \alpha = -10, \beta = 10, WAT2 = 90.2\%$

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 3 IDENT. 6
THE SEGMENT START TIME WAS AT 22:13:53.032

MACH 0.6	ALPHA -10	BETA 10	PHO -3.7	DELTA2 10.6	BYPASS 0.0	WAT2 90.2%	CIVV -13.6
PI 76.35 (11.073)	PI/P3 1.000	KTHETA 0.162	KPA2 0.035	BKPA2 0.222	KQ2 0.334	KC2 0.150	KESP 0.197
							D2 0.113

6 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 76.35 kPa (11.073 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

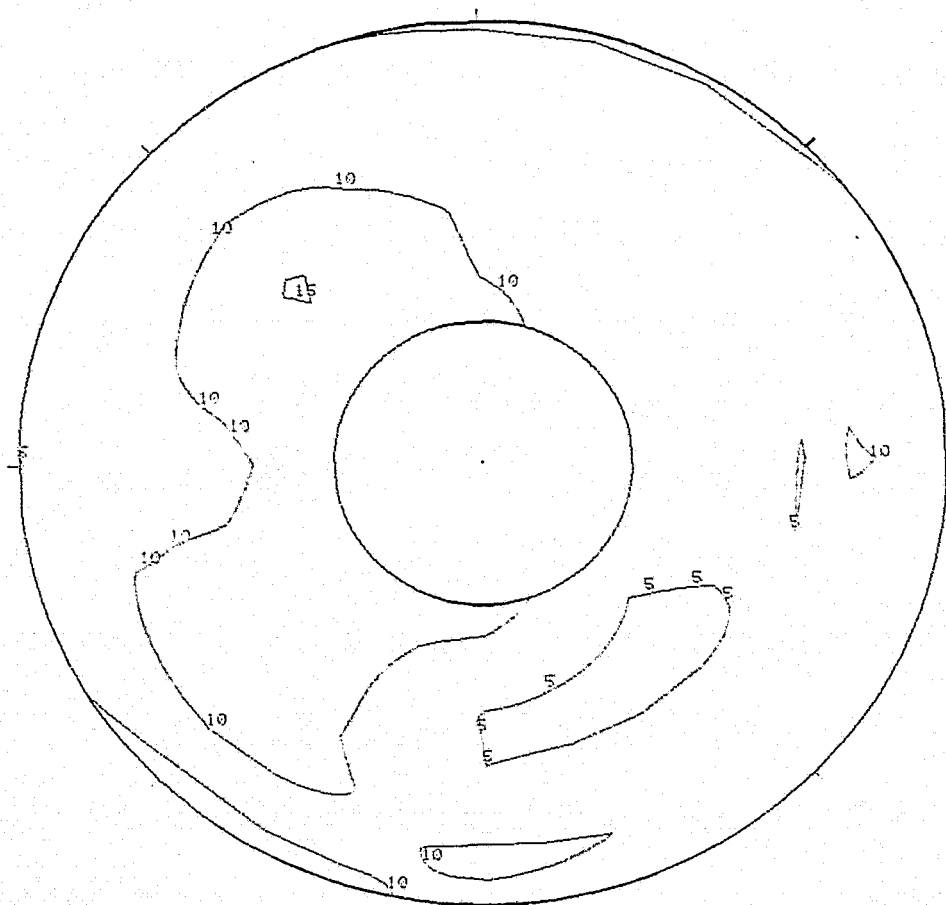
FIGURE G-6 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 90.2 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 3 IDENT. 6
THE SEGMENT START TIME WAS AT 22:13:53.088

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
0.6	-10	10	-3.0	10.6	0.0	90.2%	-18.6

6(k) Turbulence Contour 275 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00864

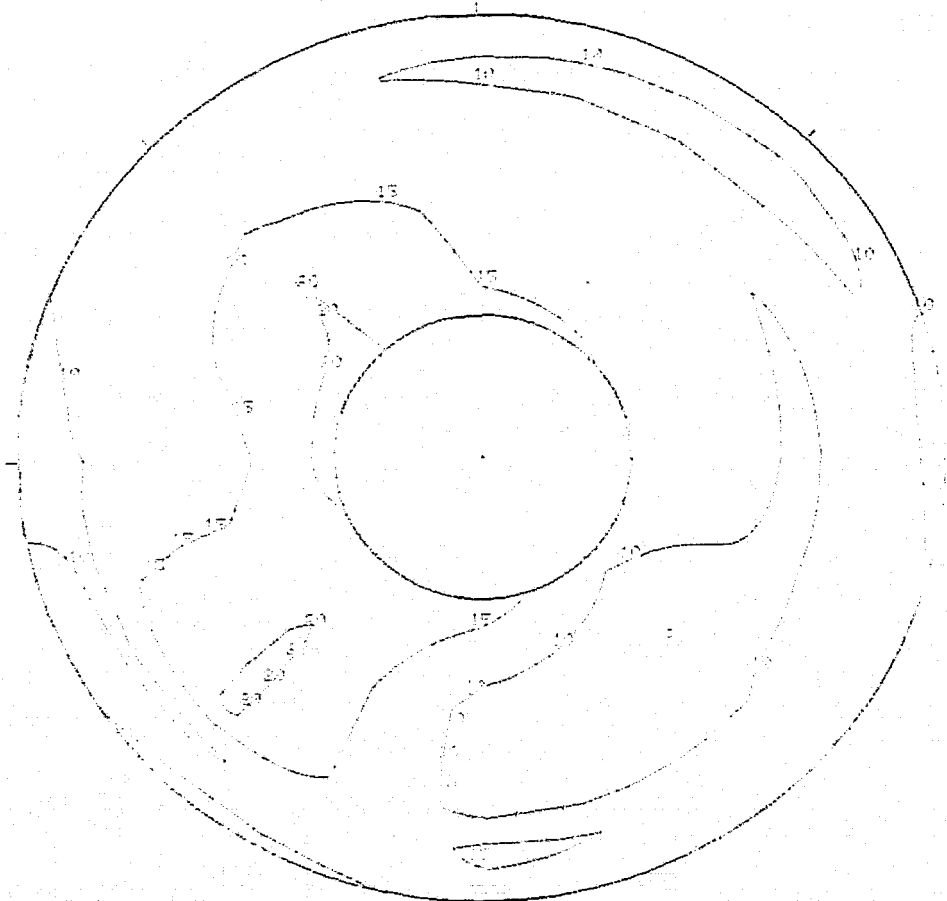
FIGURE G-6 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 90.2 %

SERIES VII - NASA DATA STUDY

DATA POINT/POINT 154/3 IDENT. 6
THE SEGMENT START TIME WAS AT 22:13:53.088

MACH	ALPHA	BETA	RHO	DELTA2	BYPASS	WAT2	CIVV
0.6	-10	10	-10.0	10.6	0.0	90.2%	-18.6

6(I) Turbulence Contour
615 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01268

FIGURE G-6 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 90.2\%$

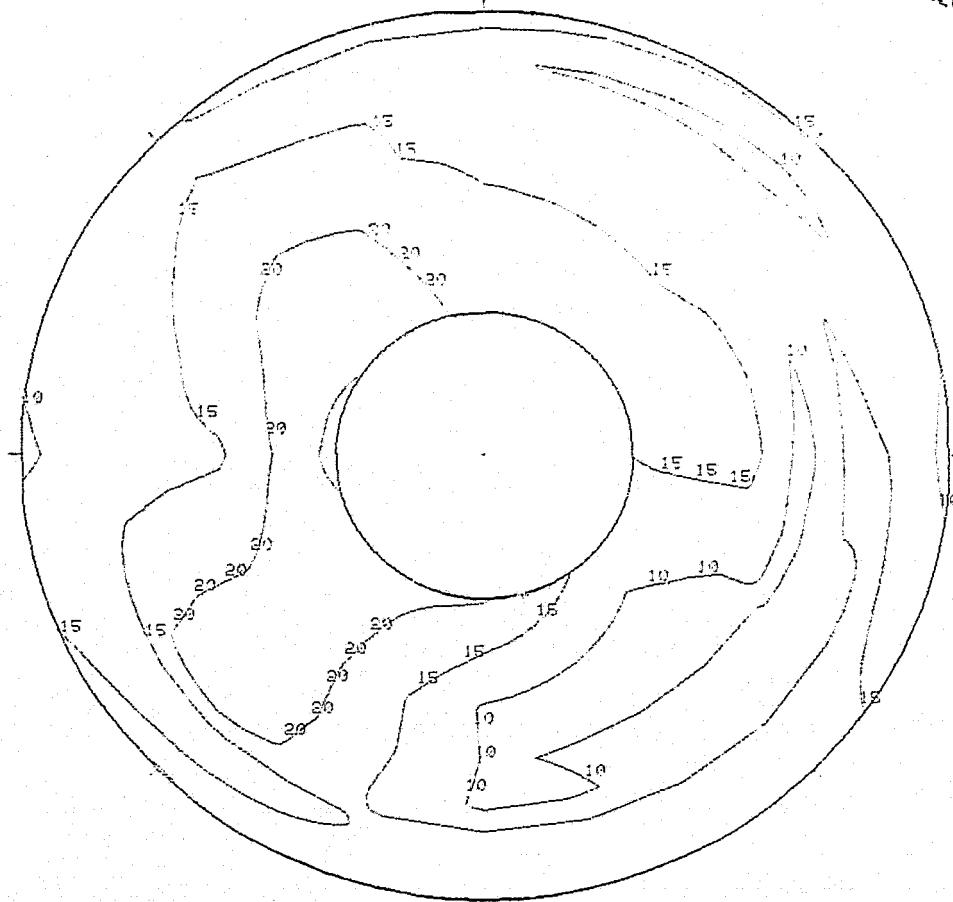
SECOND VLM - NOISE DATA STUDY

DATA POINT 184 / 3 IDENT. 6
THE SEGMENT START TIME WAS AT 02:13:53.000

MACH	ALPHA	BETA	PHI	DELTA	BYPASS	WAT2	CIWV
0.6	-10	10	-3.0	17.5	0.0	90.2%	-19.6

6 (m) Turbulence Contour 1040 Hz

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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01486

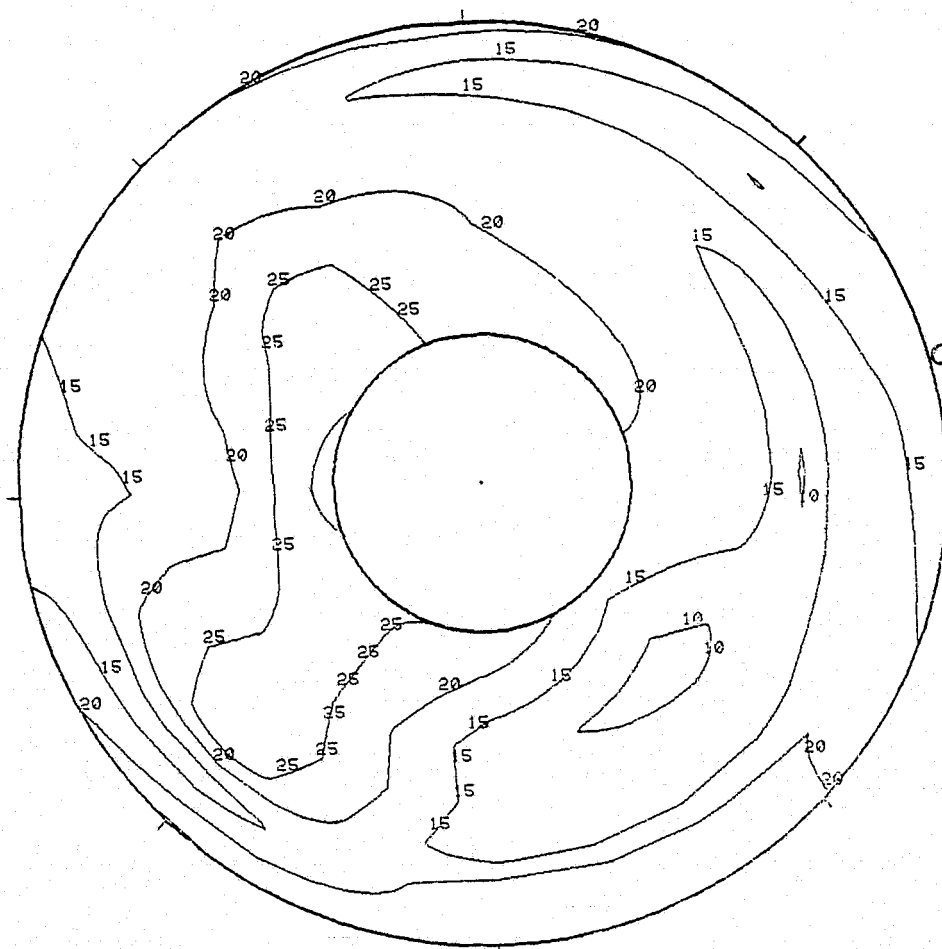
FIGURE G-6 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 90.2$ %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 3 IDENT. 6
THE SEGMENT START TIME WAS AT 22:13:53.088

MACH 0.6	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 90.2%	CIVV -18.6
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6 (n) Turbulence Contour 3070 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01803

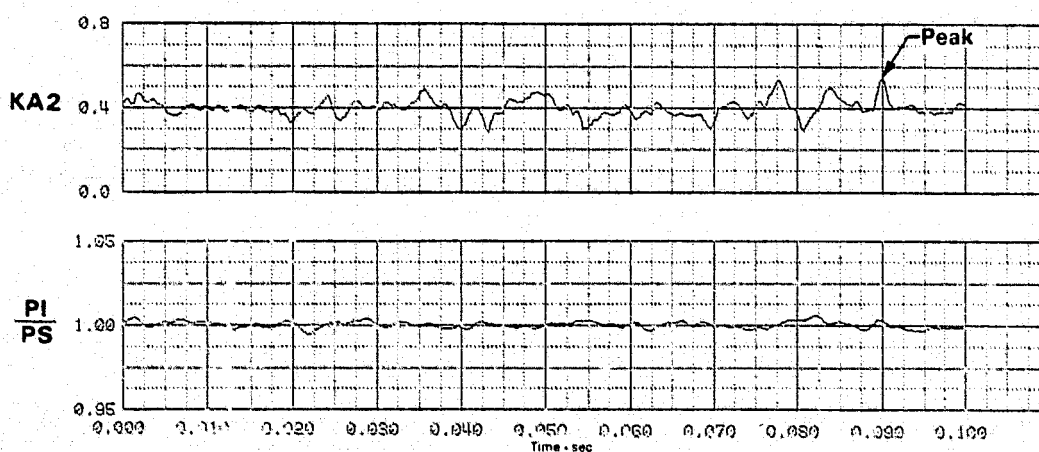
FIGURE G-6 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 90.2 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 3 IDENT. 6
THE SEGMENT START TIME WAS AT 22:13:52.038

MACH 0.6	ALPHA -10	BETA 10	R40 -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 90.2%	CIVV -18.6
PI 76.59 (11.109)	PI/PS 1.005	KTHETA 0.020	KDAS 0.137	KDRA2 0.310	KD3 0.539	KD2 0.208	KDSP 0.264
							D2 0.115

6(o) Time History Plots 275 Hz



PEAK AT TIME = 0.089925 SECONDS

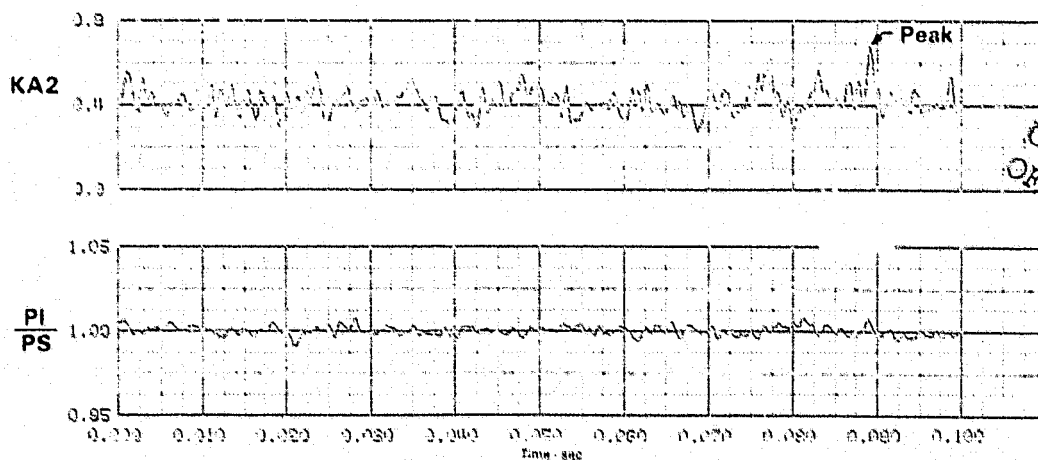
FIGURE G-6 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 90.2\%$

SERIES VII - NASA DATA STUDY

DATA PART/POINT 104.03 IDENT. 0
 THE ELEMENT START TIME WAS AT 22:13:52.00

WAT2	ALPHA	BETA	DELTA	DELTA3	BYPASS	WAT2	QIVV
90.2	-10	10	-3.0	10.3	0.0	90.2%	-19.6
76.83 (11.144)	11.43	11.43	0.113	0.113	0.113	0.113	0.109

6(p) Time History Plots 615 Hz



PEAK AT TIME = 0.089100 SECONDS

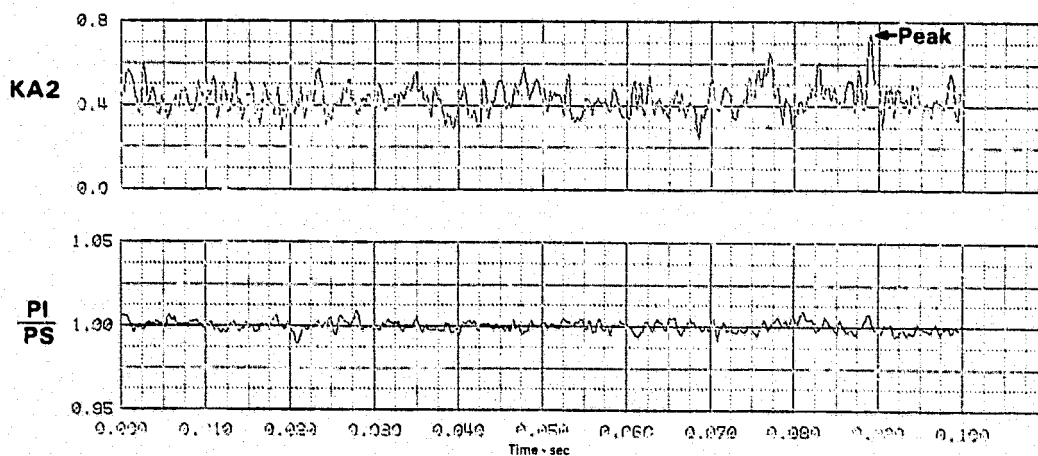
FIGURE G-6 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 90.2%

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 3 IDENT. 6
THE SEGMENT START TIME WAS AT 22:13:53.000

MACH 0.6	ALPHA -10	BETA 10	PHI -3.9	DELTA3 10.6	BYPASS 0.0	WAT2 90.2%	CIVV -18.6
PI 76.90 (11.153)	PI00 1.000	KTHETA 0.1362	VRAS 0.1206	BRAS 0.1031	KR2 0.742	KC2 0.751	KOSP 0.327
							D2 0.113

6(q) Time History Plots
1040 Hz



PEAK AT TIME = 0.088935 SECONDS

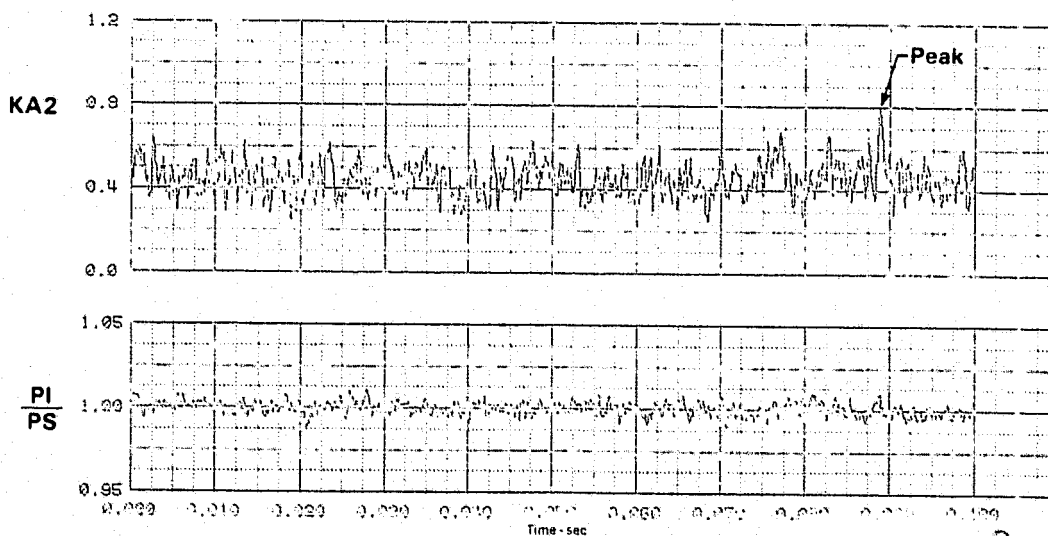
FIGURE G-6 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 90.2%

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 3 IDENT. 6
THE SEGMENT START TIME WAS AT 22:13:53.088

MACH 0.6	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 90.2%	CIVV -18.6
PI 77.01 (11.169)	PI/PS 1.026	KTHETA 0.234	KRA2 0.219	BKRA2 0.510	KA2 0.794	KC2 0.321	KOSP 0.334
							D2 0.116

6(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.088830 SECONDS

FIGURE G-6 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 90.2%

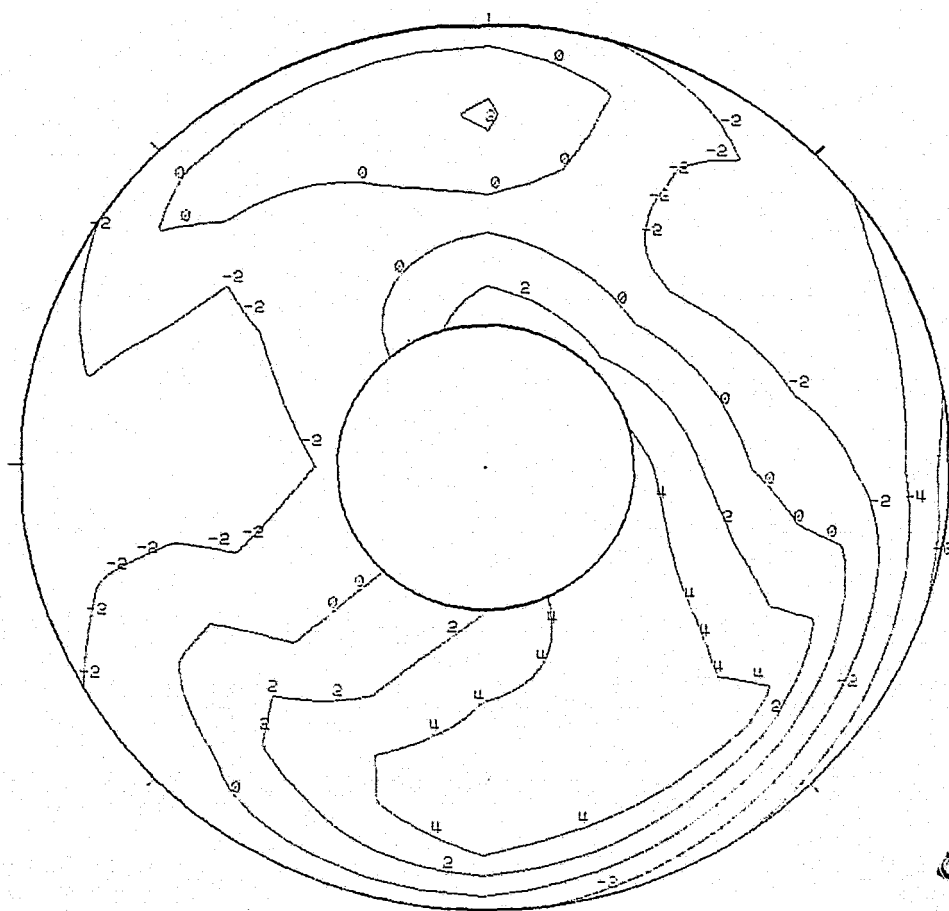
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 3 IDENT. 6
THE SEGMENT START TIME WAS AT 22:13:53.088

MACH 0.6	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 90.2%	CIVV -18.6
PI 76.59 (11.109)	PI/PS 1.003	KTHETA 0.220	KRA2 0.137	BKRA2 0.319	KA2 0.539	KC2 0.209	KOSP 0.264
							D2 0.115

**6(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
275 Hz**



MEAN FACE PRESSURE = 76.59 kPa (11.109 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.089925 SECONDS

FIGURE G-6 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 90.2 %

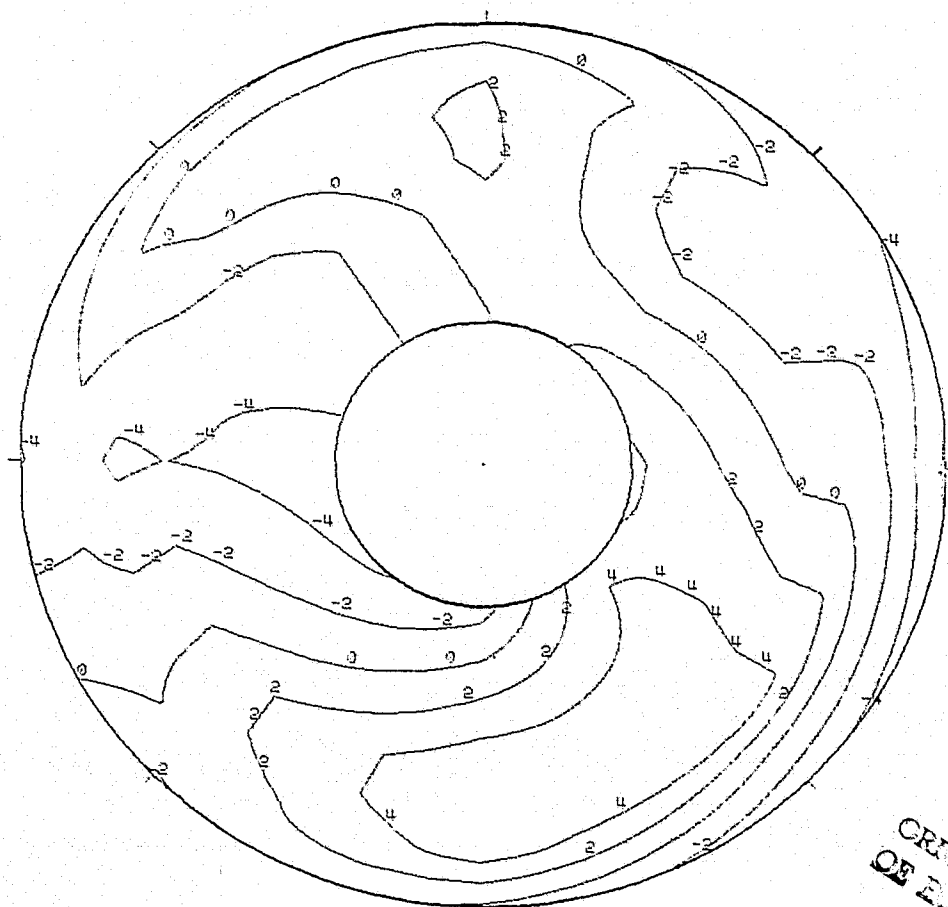
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OF FOUR 4

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 3 IDENT. 6
THE SEGMENT START TIME WAS AT 22:13:53.088

MACH 0.6	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 90.2%	CIVV -18.6
PI 76.83 (11.144)	PI/PS 1.026	KTHETA 0.250	KRA2 0.134	BKPA2 0.430	KA2 0.680	KC2 0.317	KOSP 0.304
							D2 0.109

**6 (t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
615 Hz**



MEAN FACE PRESSURE = 76.83 kPa (11.144 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.089100 SECONDS

FIGURE G-6 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 90.2 %

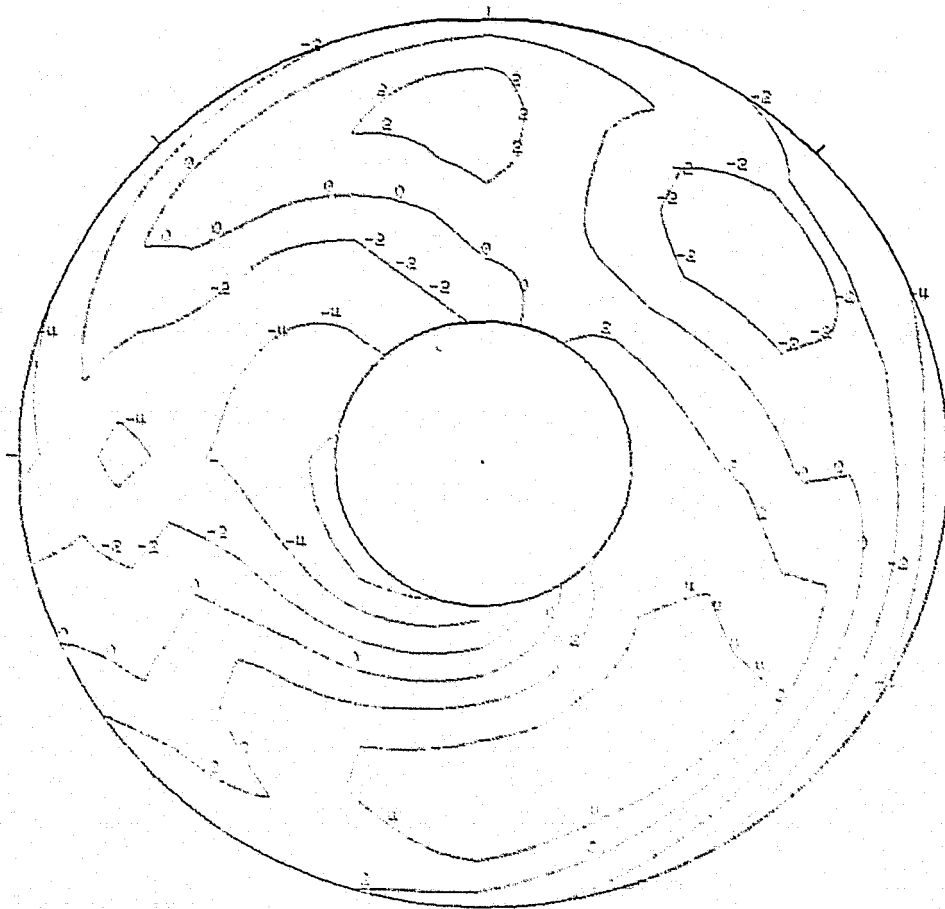
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 3 IDENT. 6
THE SEGMENT START TIME WAS AT 22:12:52.000

MACH 0.6	ALPHA -10	BETA 10	PHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 90.2%	CIVV -19.6
P1 76.90 (11.153)	PI/PS 1.007	KTHETA 0.262	KKAS 0.226	EKKAS 0.421	KAS 0.742	KCS 0.321	KOSP 0.327
							DS 0.113

**6 (u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
1040 Hz**



MEAN FACE PRESSURE = 76.90 kPa (11.153 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.088935 SECONDS

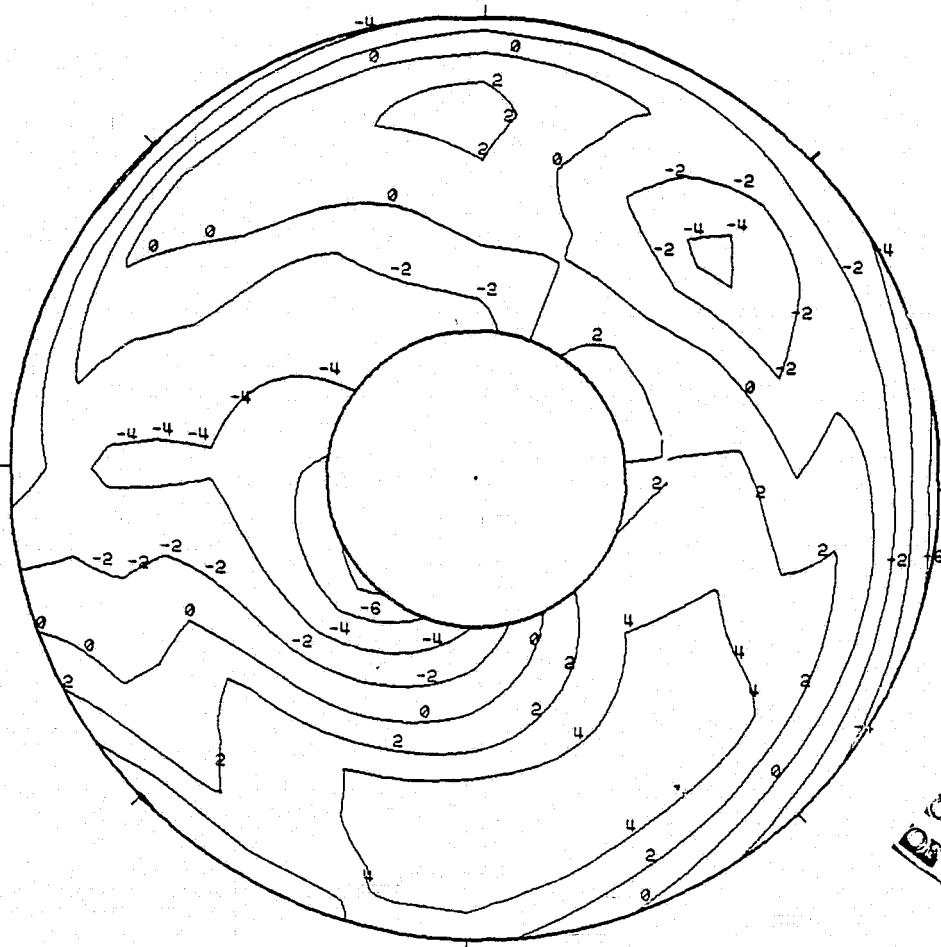
FIGURE G-6 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 90.2 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 164 / 3 IDENT. 6
THE SEGMENT START TIME WAS AT 22:13:53.088

MACH 0.6	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 90.2%	CIVV -18.6
PI 77.01 (11.169)	PI/PS 1.009	KTHETA 0.284	KRA2 0.219	BKRA2 0.510	KA2 0.794	KC2 0.321	KOSP 0.334
							D2 0.116

6 (v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
3070 Hz



MEAN FACE PRESSURE = 77.01 kPa (11.169 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.088830 SECONDS

FIGURE G-6 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 90.2 %

FLIGHT - NASA Data Study
 Part. Point - 421/10, Ident 7
 RHO DELTA3 BYPASS CIVV
 0.6 10.5 0.0 -8.513

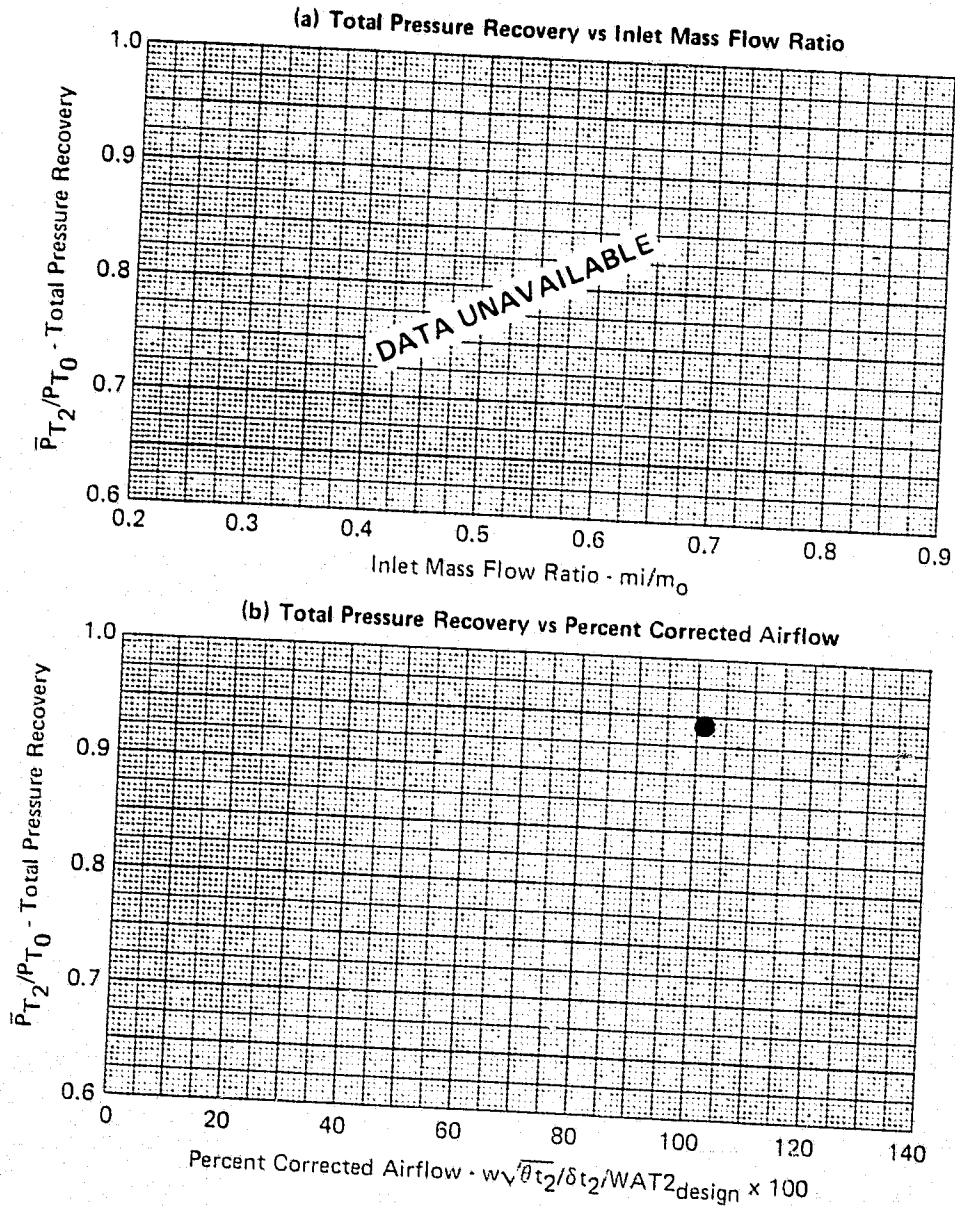
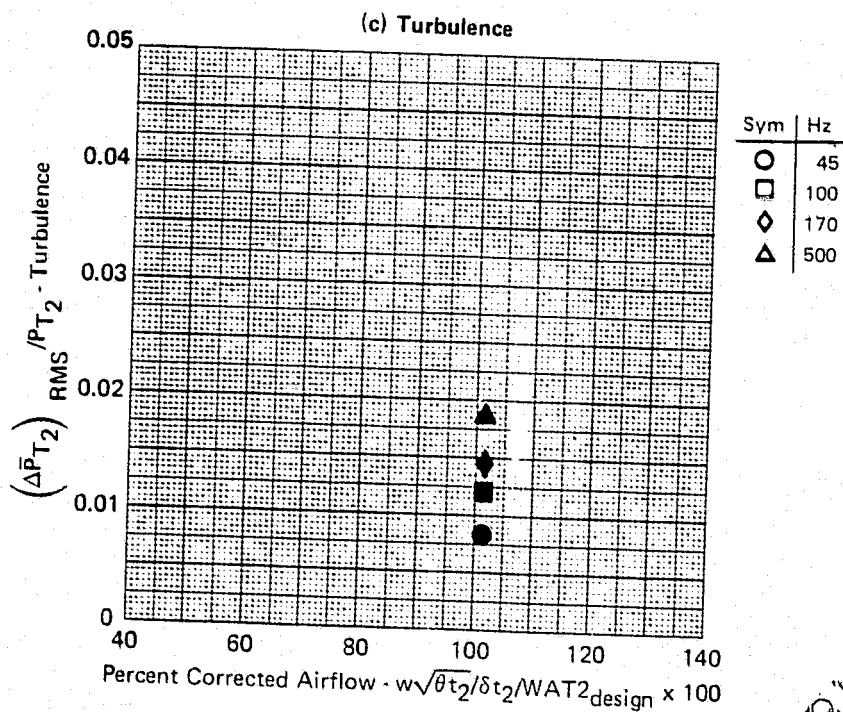


FIGURE G-7
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69, \alpha = -8.4, \beta = 10.6, WAT2 = 101.2 \%$

GP77-0658-1

FLIGHT - NASA Data Study
 Part/Point - 421/10, Ident 7
 RHO DELTA3 BYPASS CIVV
 0.6 10.5 0.0 -8.513



GP77-0858-5

FIGURE G-7 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69, \alpha = -8.4, \beta = 10.6, WAT2 = 101.2 \%$

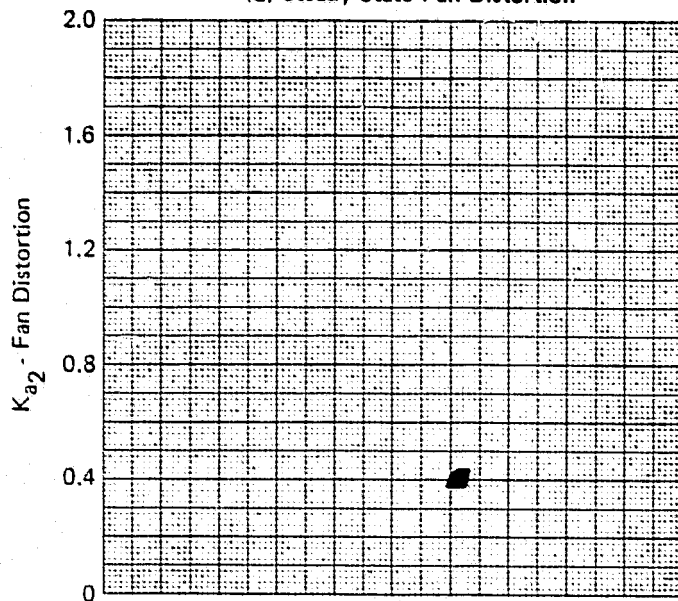
REPRODUCTION PAGE 11
 OF 12 PAGES

FLIGHT - NASA Data Study

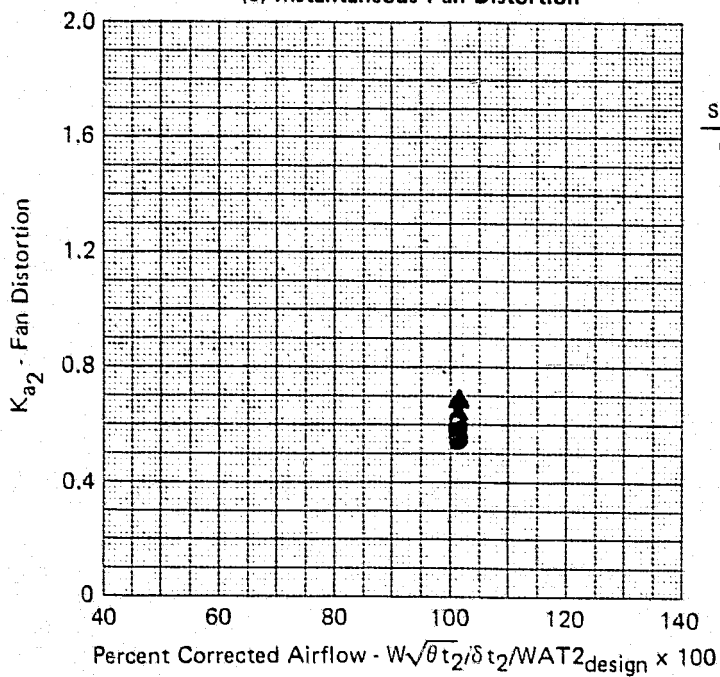
Part/Point - 421/10, Ident 7

RHO	DELTA3	BYPASS	CIVV
0.6	10.5	0.0	-8.513

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion



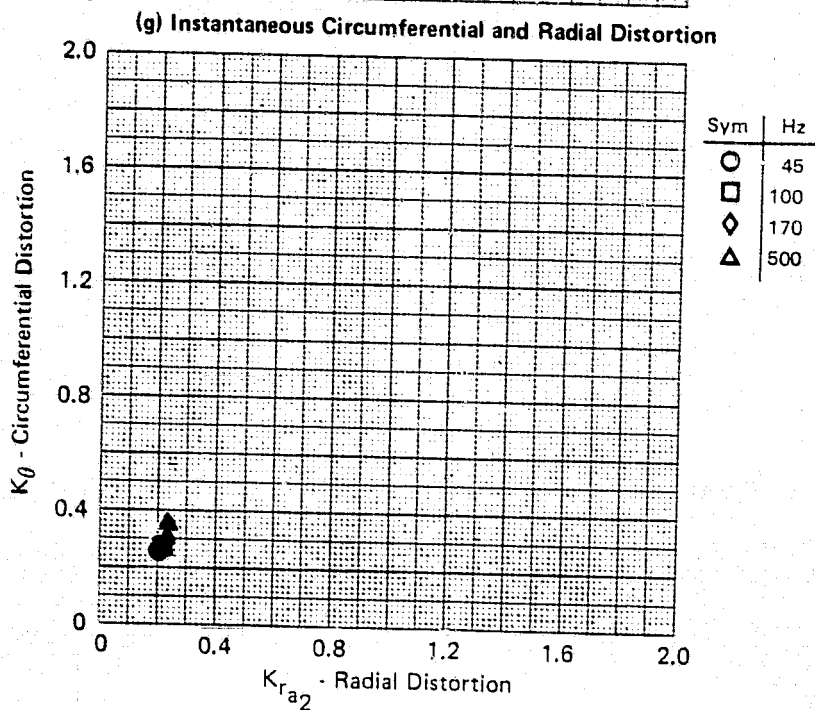
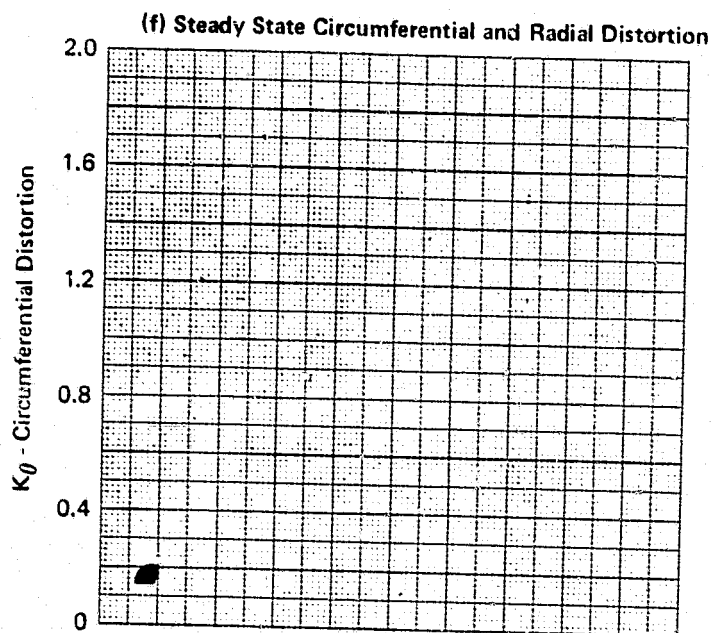
GP77 0658-3

FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69$, $\alpha = -8.4$, $\beta = 10.6$, $WAT2 = 101.2\%$

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FLIGHT - NASA Data Study
Part/Point - 421/10, Ident 7

RHO DELTA3 BYPASS CIVV
0.6 10.5 0.0 -8.513



GP77-0658-2

FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69$, $\alpha = -8.4$, $\beta = 10.6$, $WAT2 = 101.2\%$

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FLIGHT - NASA Data Study
 Part/Point - 421/10, Ident 7
 RHO DELTA3 BYPASS CIVV
 0.6 10.5 0.0 -8.513

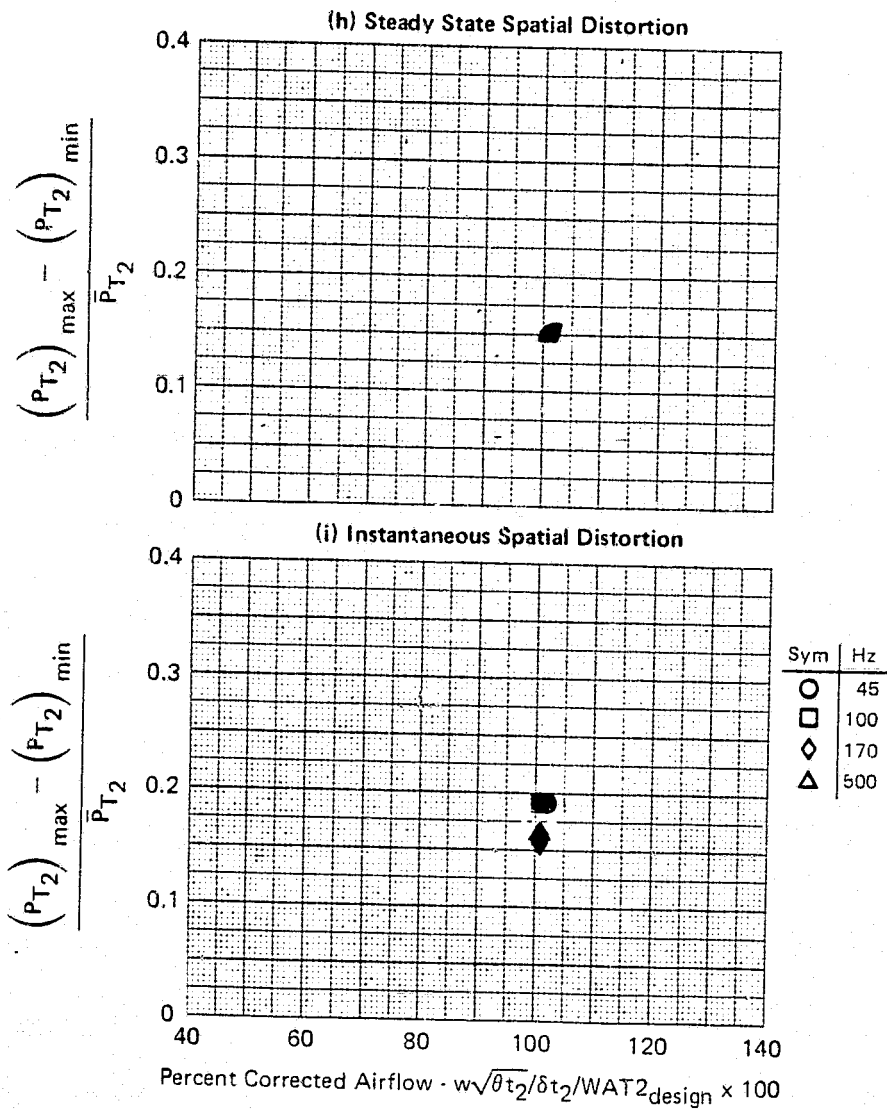


FIGURE G-7 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.69$, $\alpha = -8.4$, $\beta = 10.6$, $WAT2 = 101.2\%$

GP77-0658-4

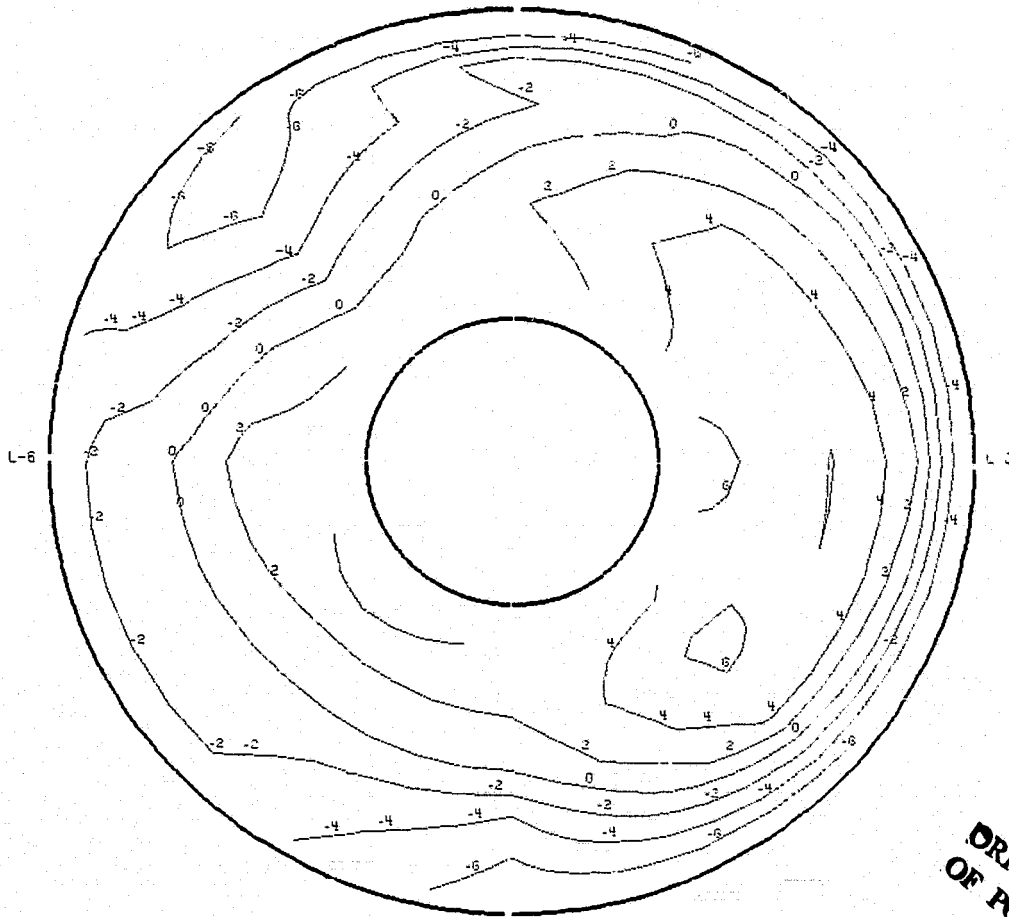
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21:09:24.775

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.69	-8.5	10.5	12142(39835)	.60	10.5	0.0	101.2%	-8.513
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
24.47(3.549)	1.0	.1766	.1623	.2269	.4033	.1512	—	.1509

7 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 24.47 kPa (3.549 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .69$, $\alpha = -8.5$, $\beta = 10.5$, WAT2 = 101.2 %

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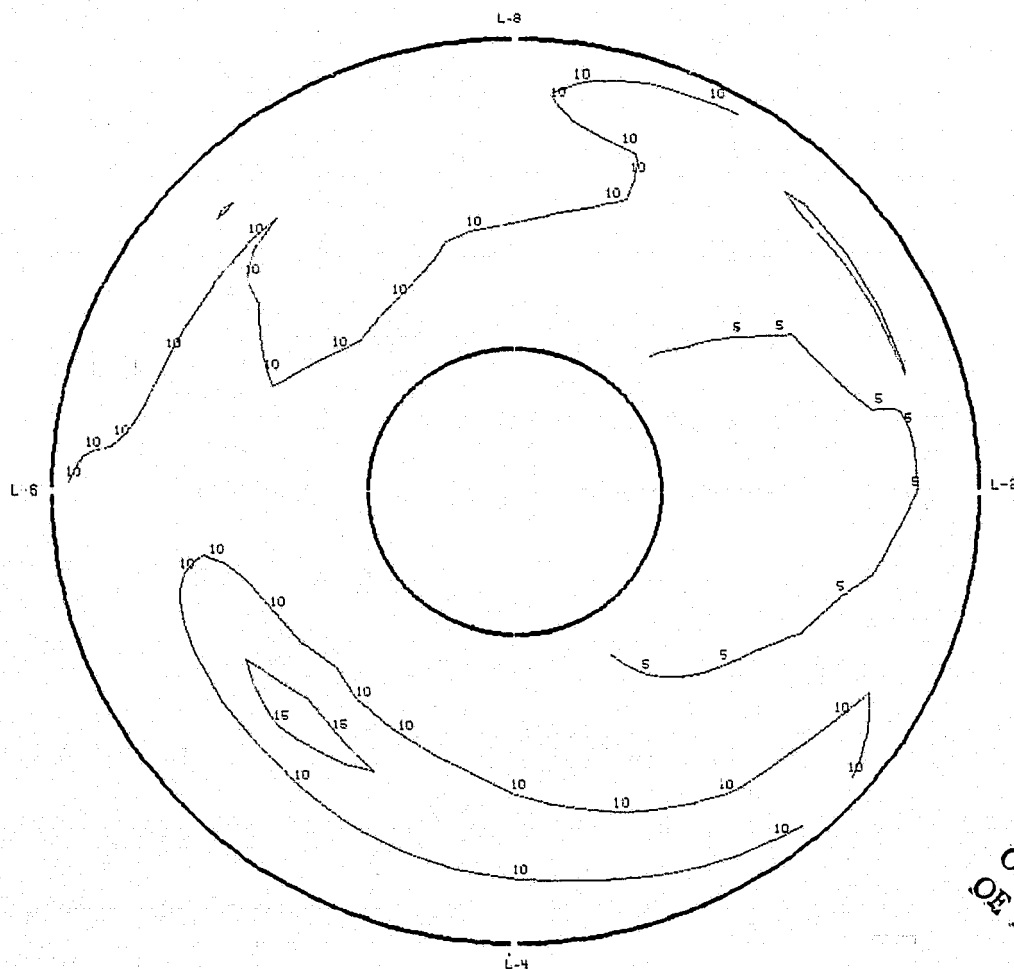
C-2

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21:09:24.775

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.69	-8.4	10.6	12142 (39835)	0.60	10.5	0.0	101.2%	-8.501

7 (k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0085

FIGURE G-7 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.69$, $\alpha = -8.4$, $\beta = 10.6$, $WAT2 = 101.2\%$

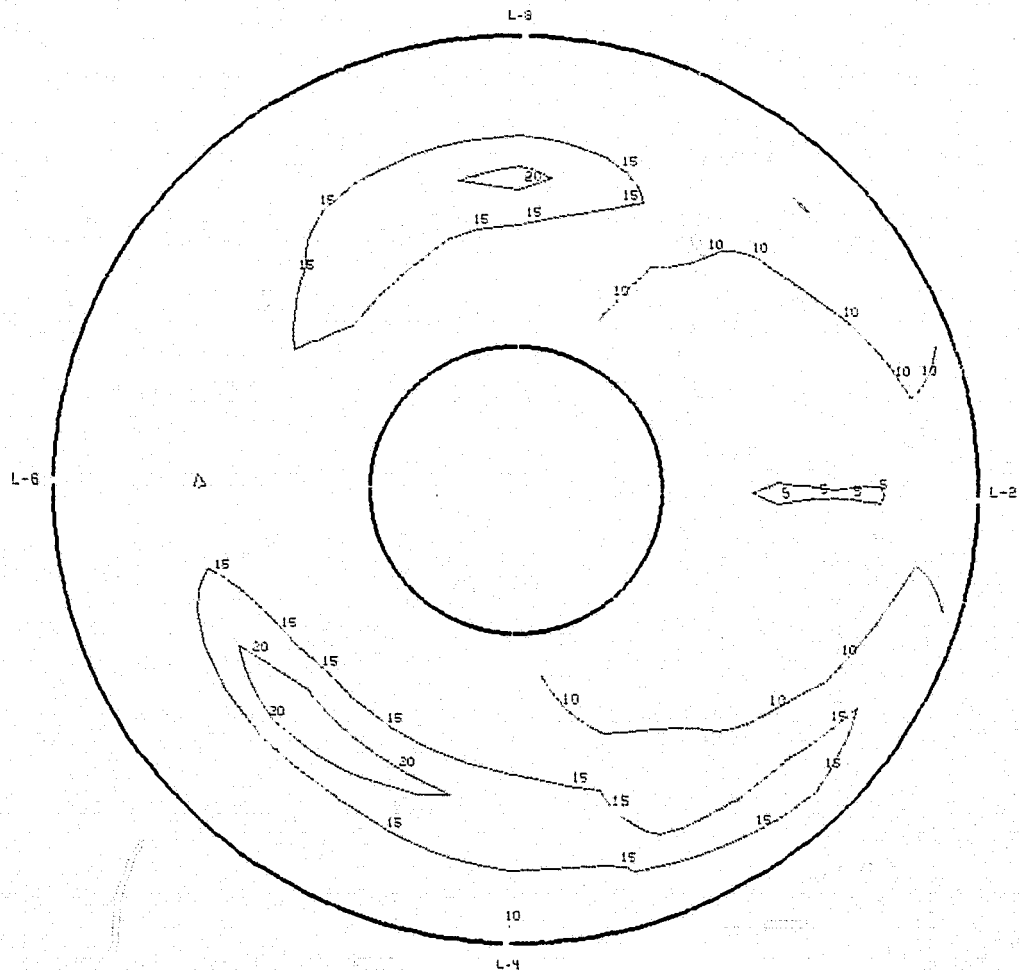
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21:09:24.775

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.69	-8.4	10.6	12142 (39835)	0.60	10.5	0.0	101.2%	-8.501

7 (I) Turbulence Contour
100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0120

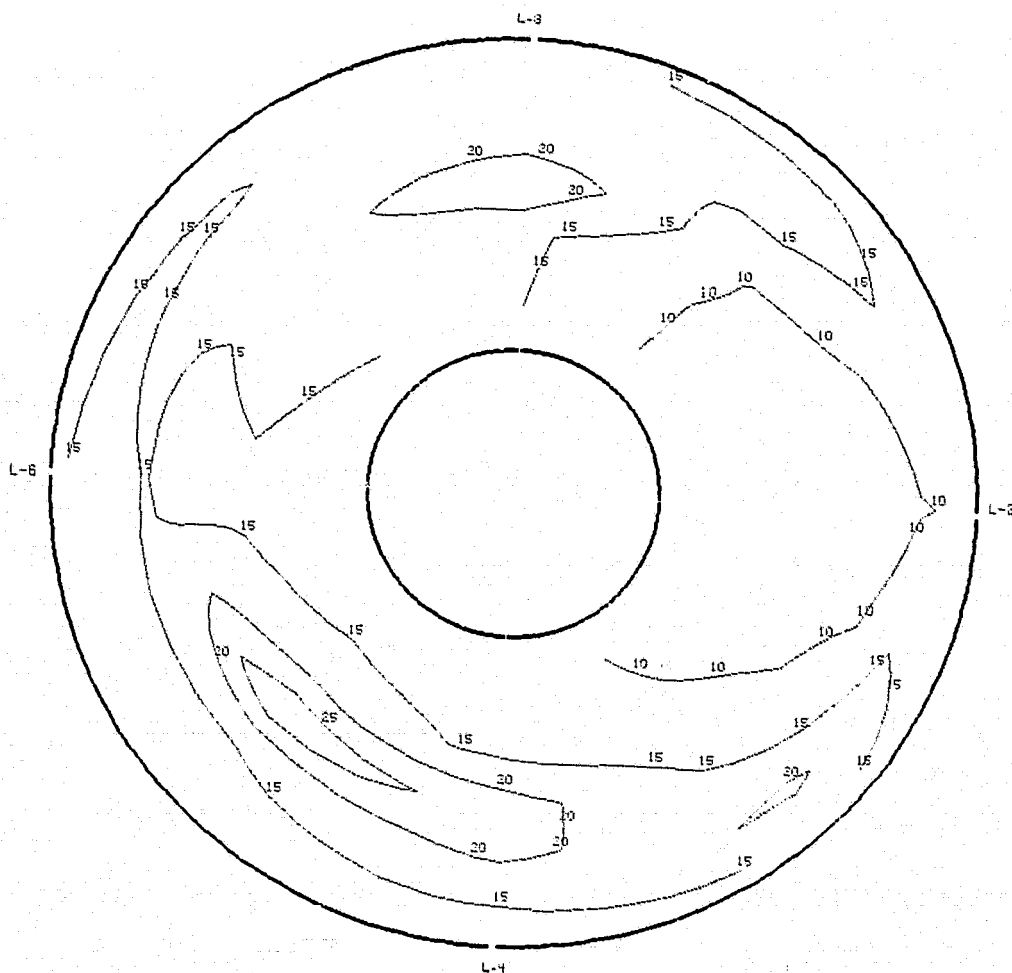
FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.69$, $\alpha = -8.4$, $\beta = 10.6$, $WAT2 = 101.2\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21:09:24.775

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.69	-8.5	10.5	12142(39835)	.60	10.5	0.0	101.2%	-8.513

7(m) Turbulence Contour
170 Hz



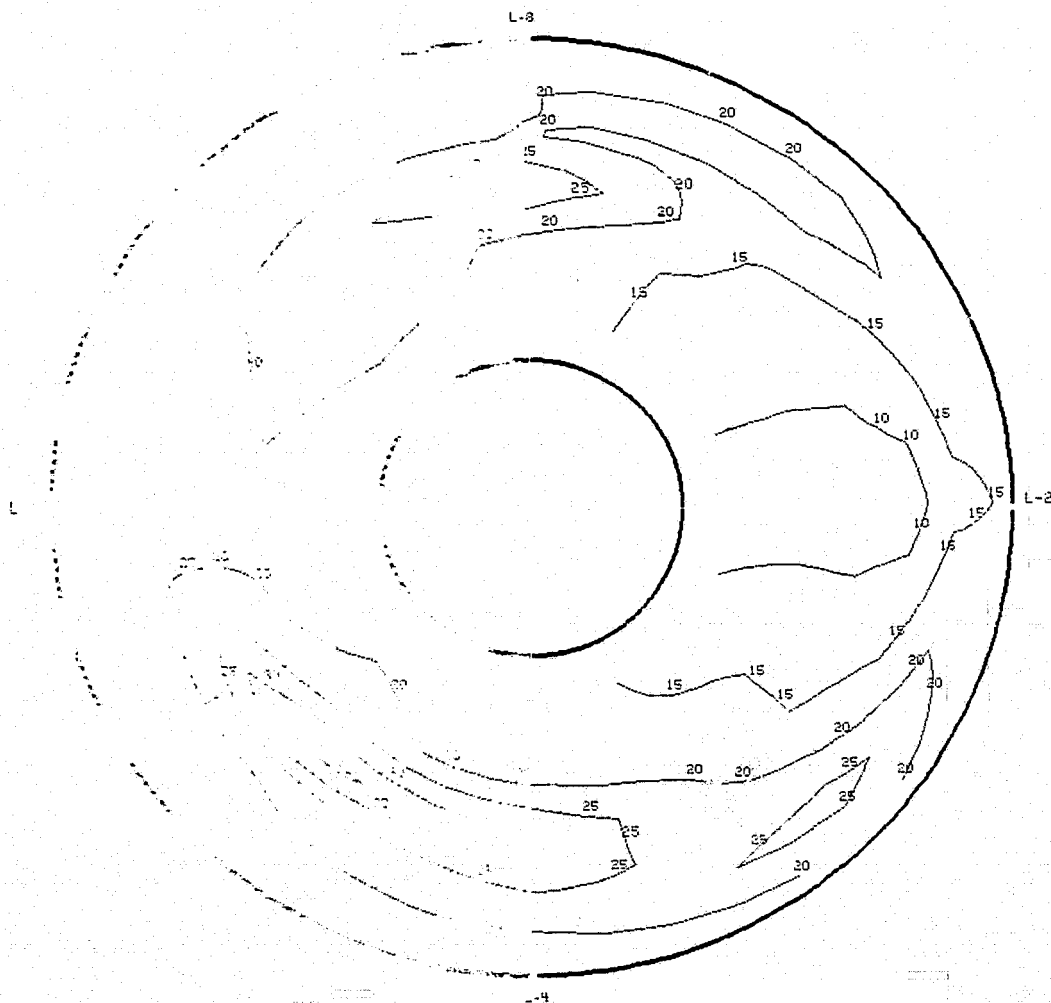
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0144
FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .69$, $\alpha = -8.5$, $\beta = 10.5$, $WAT2 = 101.2\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21:09:24.775

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.69	-8.5	10.5	12142 (39835)	0.60	10.5	0.0	101.2%	-8.513

7 (n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0186

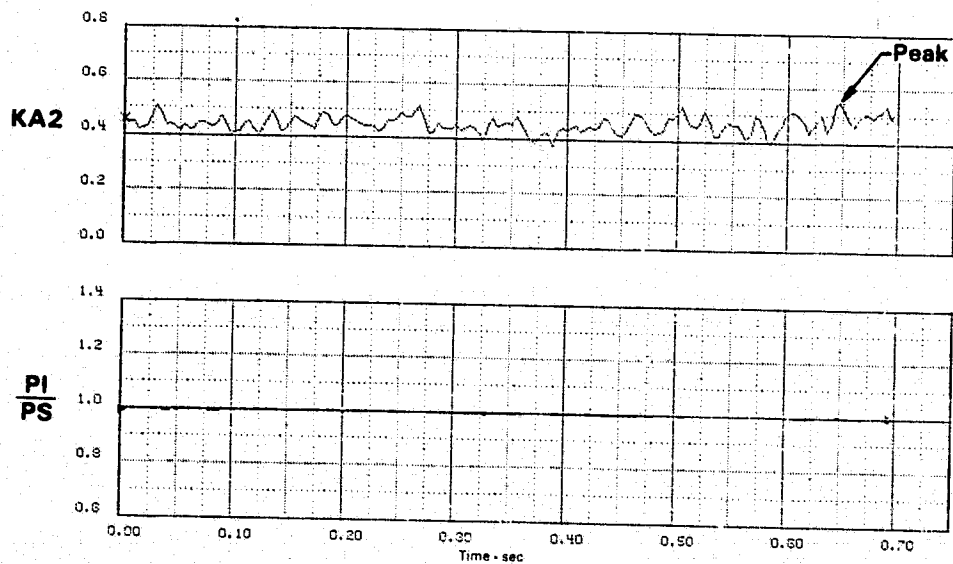
FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69$, $\alpha = -8.4$, $\beta = 10.6$, WAT2 = 101.2 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21:09:24.776

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.69	-8.4	10.6	12147 (39853)	0.80	10.8	0.0	101.2%	-8.501
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
24.55 (3.56)	1.0031	0.2712	0.2008	0.2803	0.5516	0.3114	0.3050	0.1933

7(o) Time History Plots
45 Hz



PEAK AT TIME = 0.64798 SECONDS

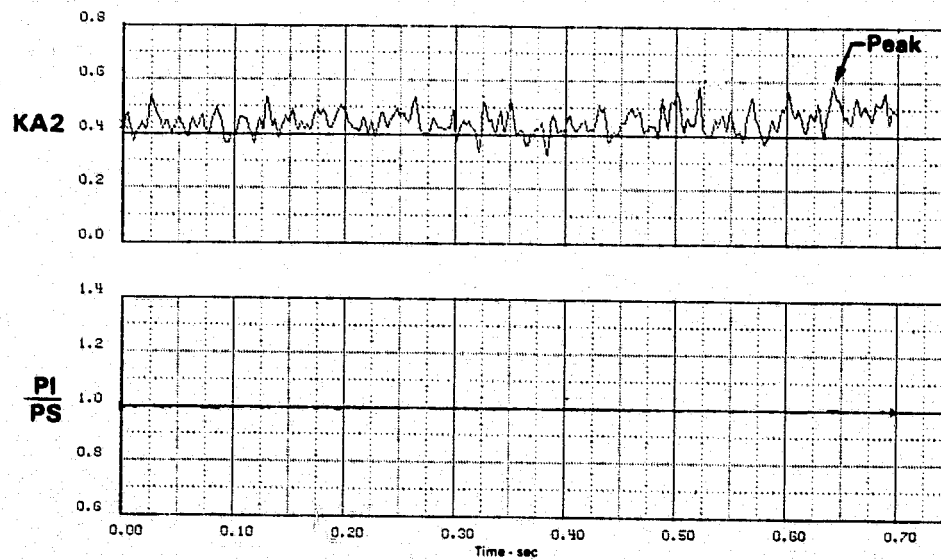
FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.69$, $\alpha = -8.4$, $\beta = 10.6$, $WAT2 = 101.2\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21:09: 24.775

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.69	-8.4	10.6	12147 (39853)	0.80	10.5	0.0	101.2%	-8.501
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
24.55 (3.58)	1.0031	0.2867	0.2143	0.2996	0.5865	0.3574	0.3362	0.1596

7 (p) Time History Plots
100 Hz



PEAK AT TIME = 0.64104 SECONDS

FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.69$, $\alpha = -8.4$, $\beta = 10.6$, $WAT2 = 101.2\%$

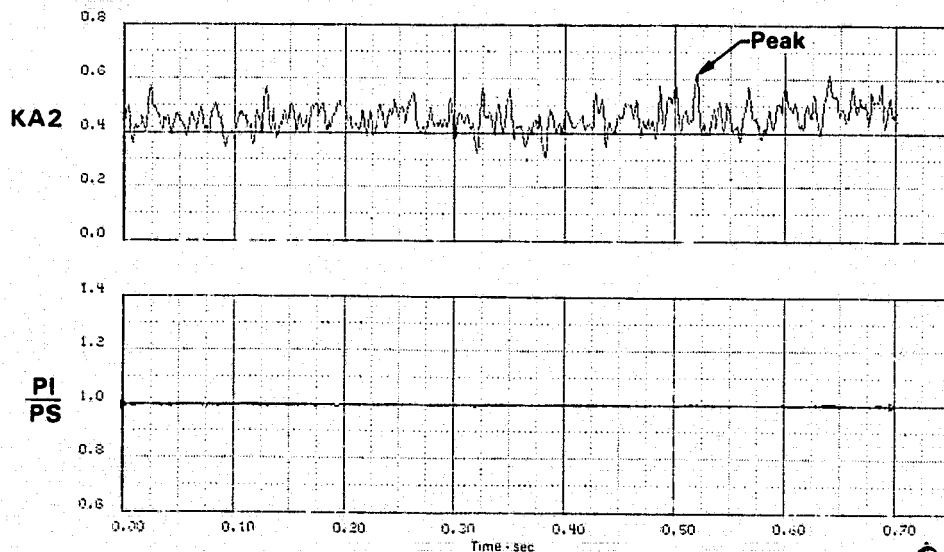
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21:09:24.775,

MACH .69	ALPHA -8.5	BETA 10.5	ALT 12145(39848)	RHO .60	DELTA3 10.5	BYPASS 0.0	WAT2 101.2%	CIVV -8.513
PI 24.48(3.55)	PI/PS 1.0003	KTHETA .2912	KRA2 .2344	BKRA2 .3277	KA2 .619	KC2 .3606	KOSP .3615	D2 .1594

7 (q) Time History Plots 170 Hz



PEAK AT TIME = 0.52011 SECONDS

FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .69$, $\alpha = -8.5$, $\beta = 10.5$, WAT2 = 101.2 %

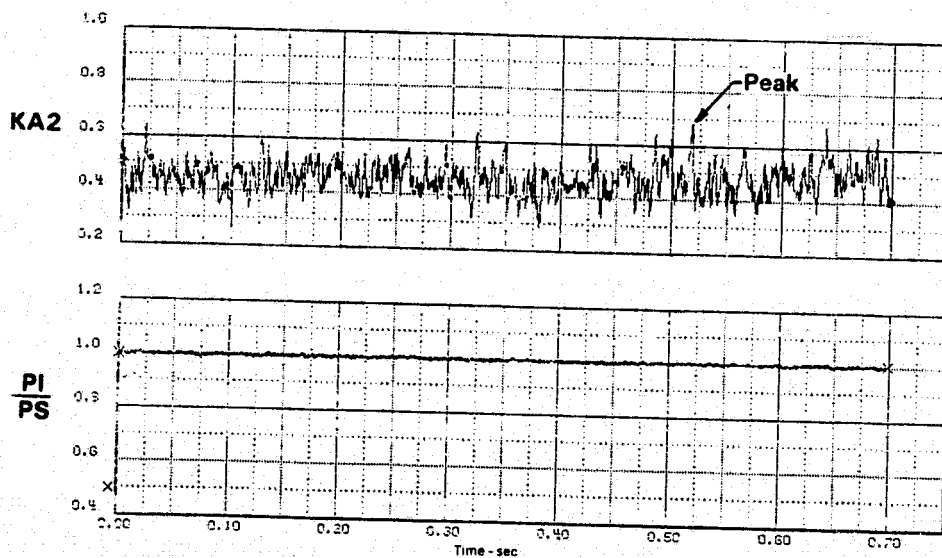
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21:09:24.775

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.69	-8.5	10.5	12145 (39846)	0.60	10.5	0.0	101.2%	-8.513
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	KOSP	D2
24.52 (3.556)	1.0025	0.3536	0.2350	0.3285	0.6822	0.4519	0.4365	0.1681

7(r) Time History Plots
500 Hz



PEAK AT TIME = 0.51789 SECONDS

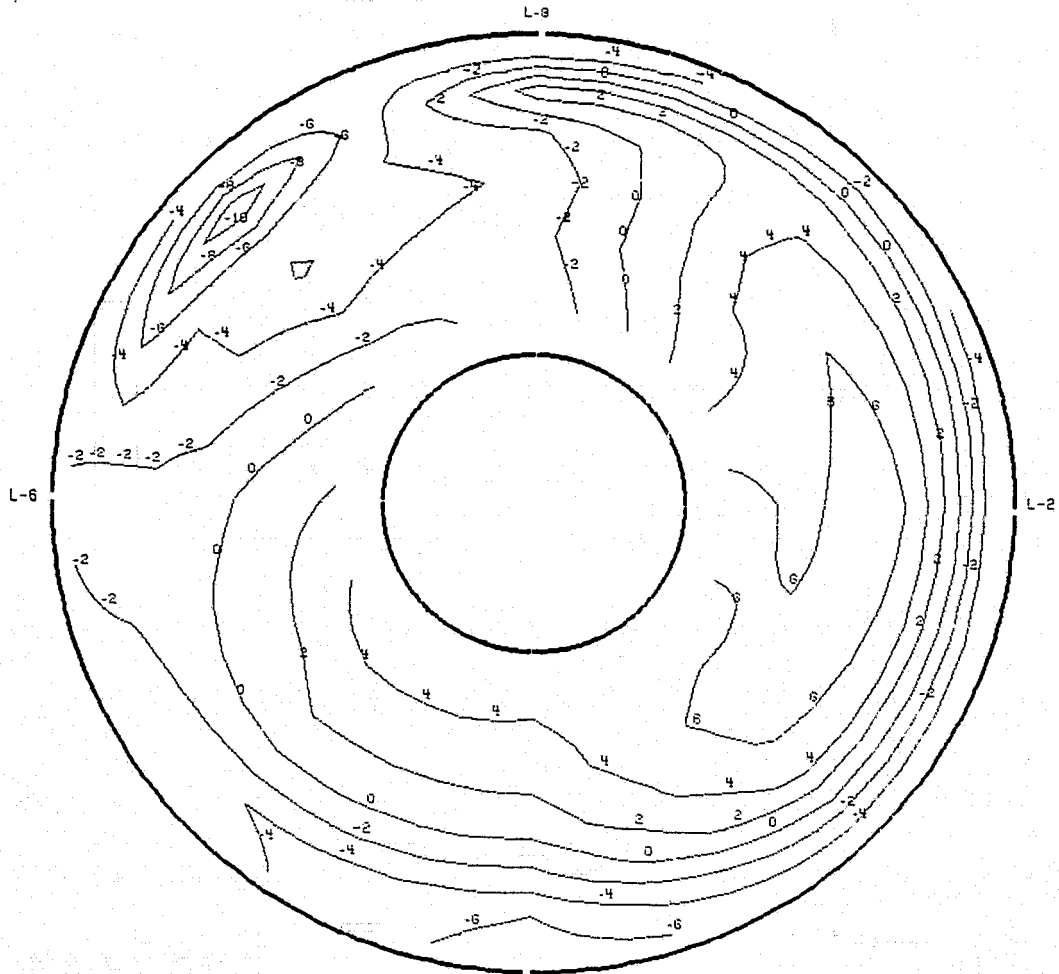
FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.69$, $\alpha = -8.5$, $\beta = 10.5$, WAT2 = 101.2 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21:09: 24.775

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.69	-8.4	10.6	12147 (39853)	0.80	10.5	0.0	101.2%	-8.501
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
24.55 (3.56)	1.0031	0.2713	0.2005	0.2803	0.5516	0.3114	0.3080	0.1933

7 (s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz



MEAN FACE PRESSURE = 24.55 kPa (3.56 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.64798 SECONDS

FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.69$, $\alpha = -8.4$, $\beta = 10.6$, $WAT2 = 101.2\%$

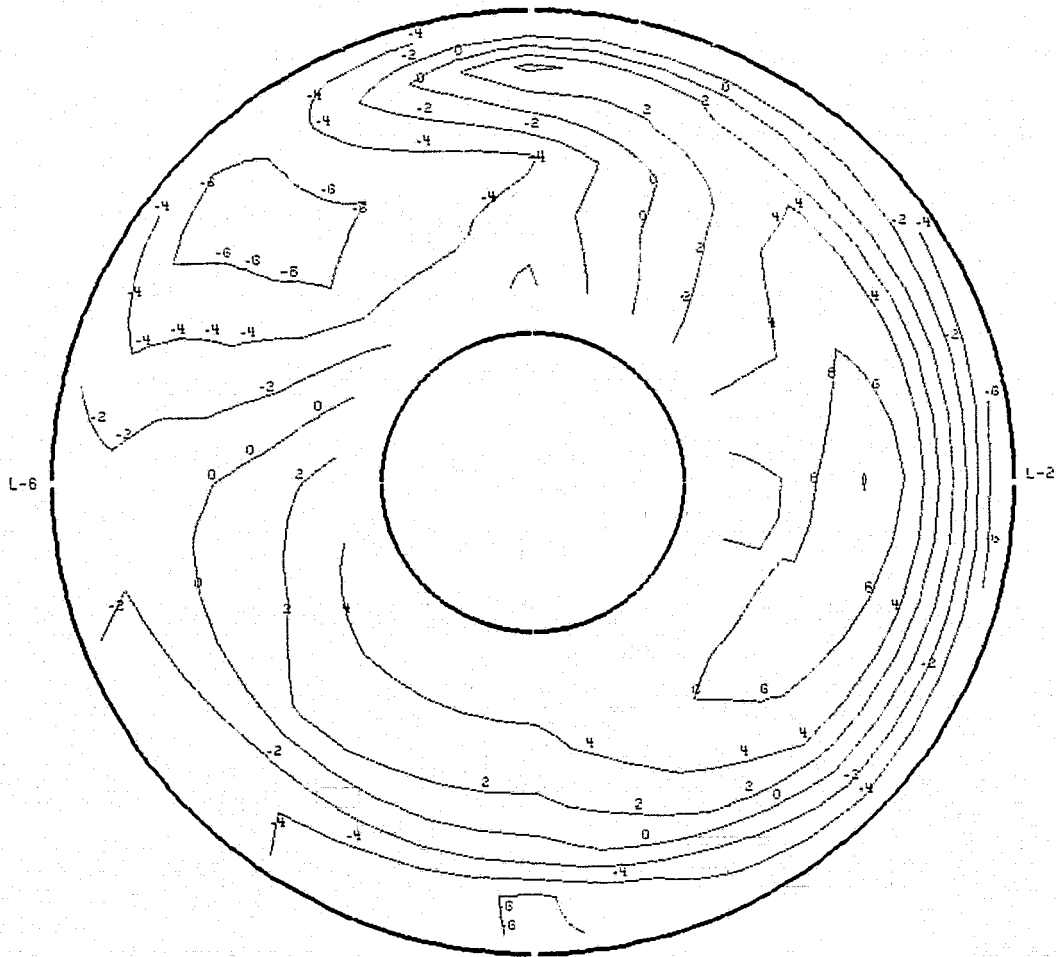
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21:09: 24.775

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.69	-8.4	10.6	12147 (39853)	0.60	10.5	0.0	101.2%	-8.501
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
24.55 (3.56)	1.0031	0.2867	0.2143	0.2996	0.5865	0.3574	0.3362	0.1596

7 (t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz



MEAN FACE PRESSURE = 24.55 kPa (3.56 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.64104 SECONDS

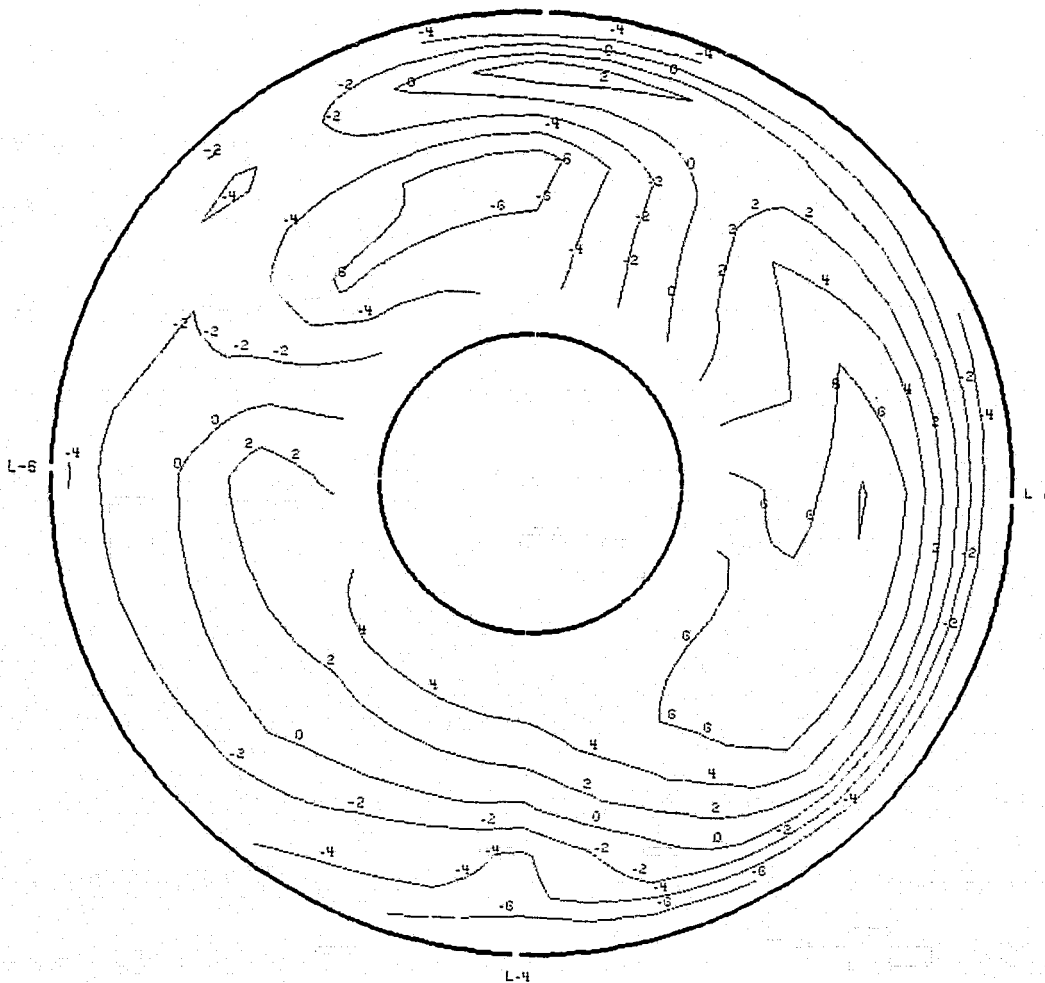
FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.69$, $\alpha = -8.4$, $\beta = 10.6$, $WAT2 = 101.2\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21:09:24.775

MACH .69	ALPHA -8.5	BETA 10.5	ALT 12145(39846)	RHO .60	DELTA3 10.5	BYPASS 0.0	WAT2 101.2%	CIVV -8.513
PI 24.48(3.55)	PI/PS 1.0003	KTHETA .2912	KRA2 .2344	BKRA2 .3277	KA2 .619	KC2 .3606	KOSP .3615	O2 .1594

7(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 24.48 kPa (3.550 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.52011 SECONDS

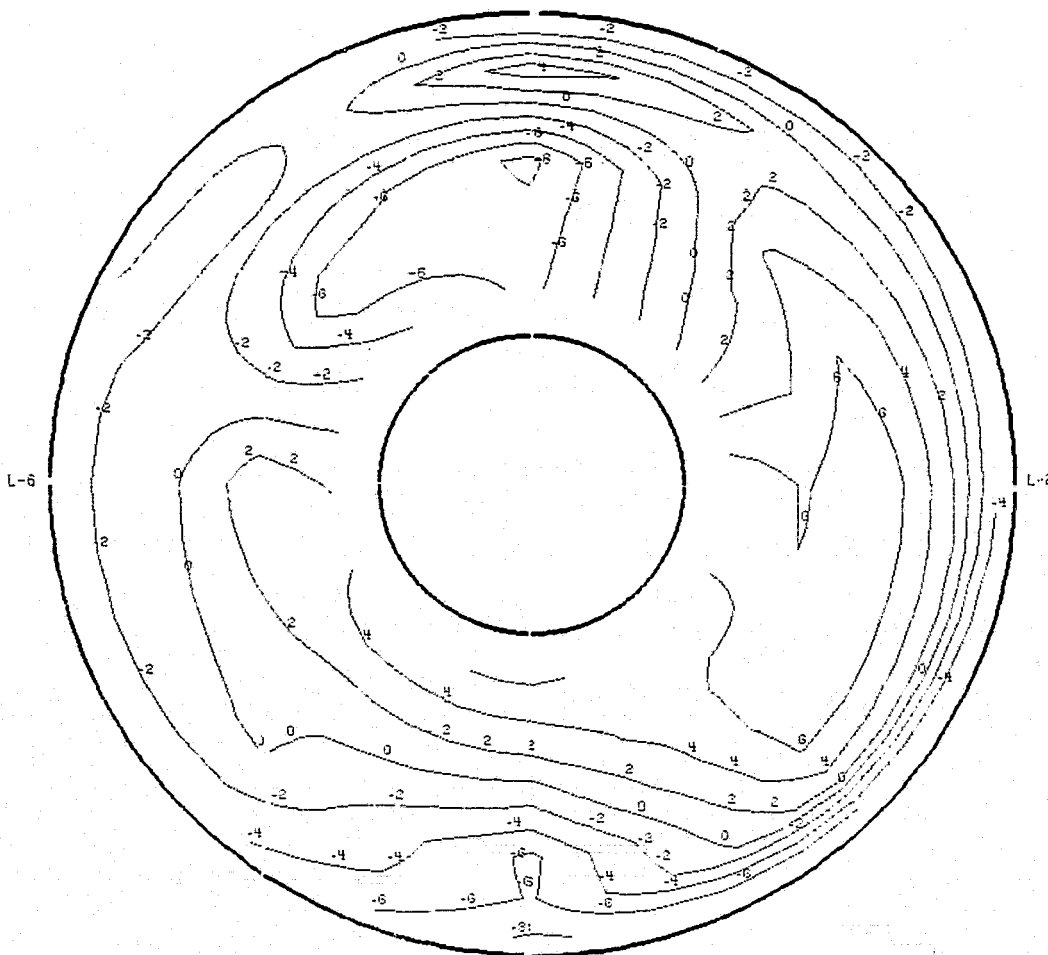
FIGURE G-7 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .69$, $\alpha = -8.5$, $\beta = 10.5$, WAT2 = 101.2 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/10 IDENT. 7
THE SEGMENT START TIME WAS AT 21: 09: 24.775

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.69	-8.5	10.5	12145 (39846)	0.60	10.5	0.0	101.2%	-8.513
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
24.52 (3.556)	1.0025	0.3536	0.2350	0.3285	0.6822	0.4519	0.4365	0.1681

7 (v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz



MEAN FACE PRESSURE = 24.52 kPa (3.556 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.51789 SECONDS

FIGURE G-7 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.69$, $\alpha = -8.5$, $\beta = 10.5$, WAT2 = 101.2 %

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SERIES VII - NASA Data Study
Part/Point - 112/7, Ident 8

RHO	DELTA3	BYPASS	CIVV
7.0	10.6	0.0	-25.00

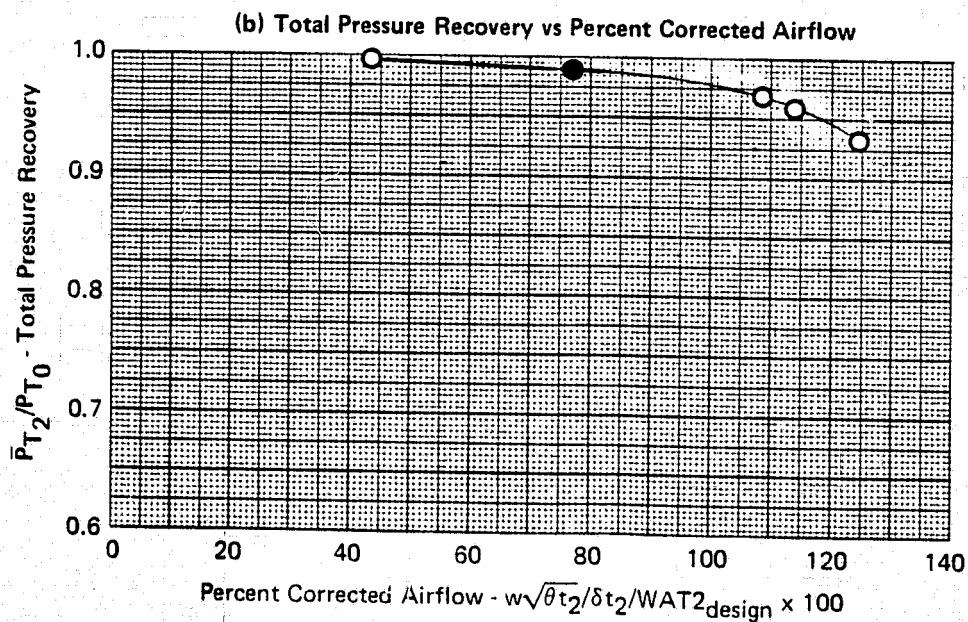
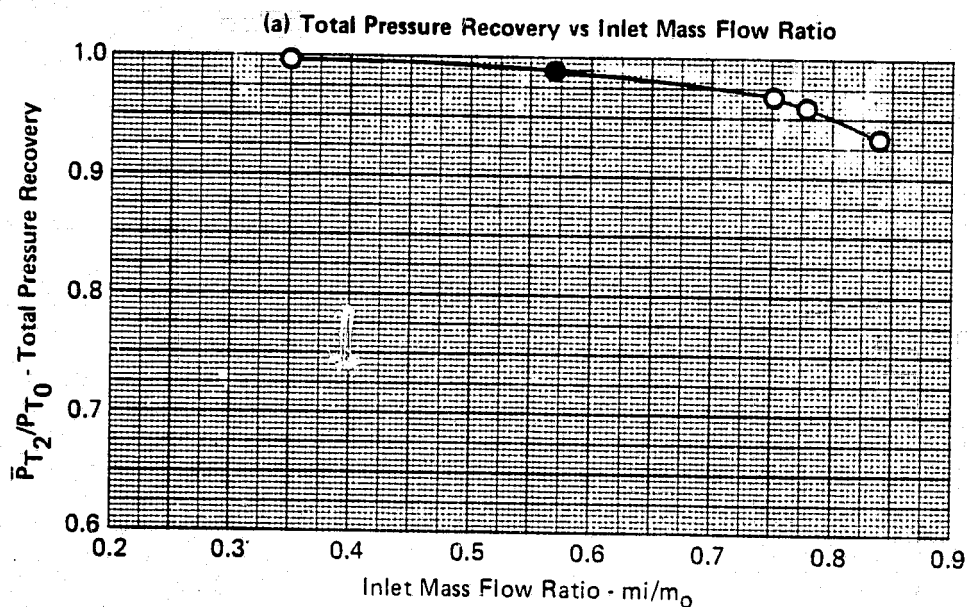


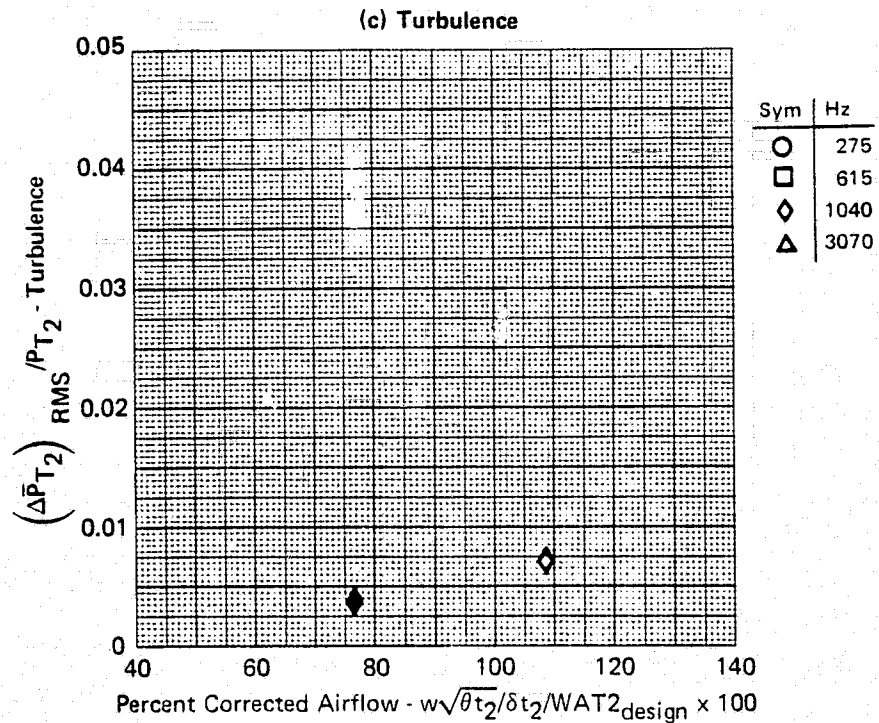
FIGURE G-8
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60, \alpha = 4.0, \beta = 0.0, WAT2 = 76.6\%$

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SERIES VII - NASA Data Study

Part/Point - 112/7, Ident 8

RHO	DELTA3	BYPASS	CIVV
7.0	10.6	0.0	-25.00

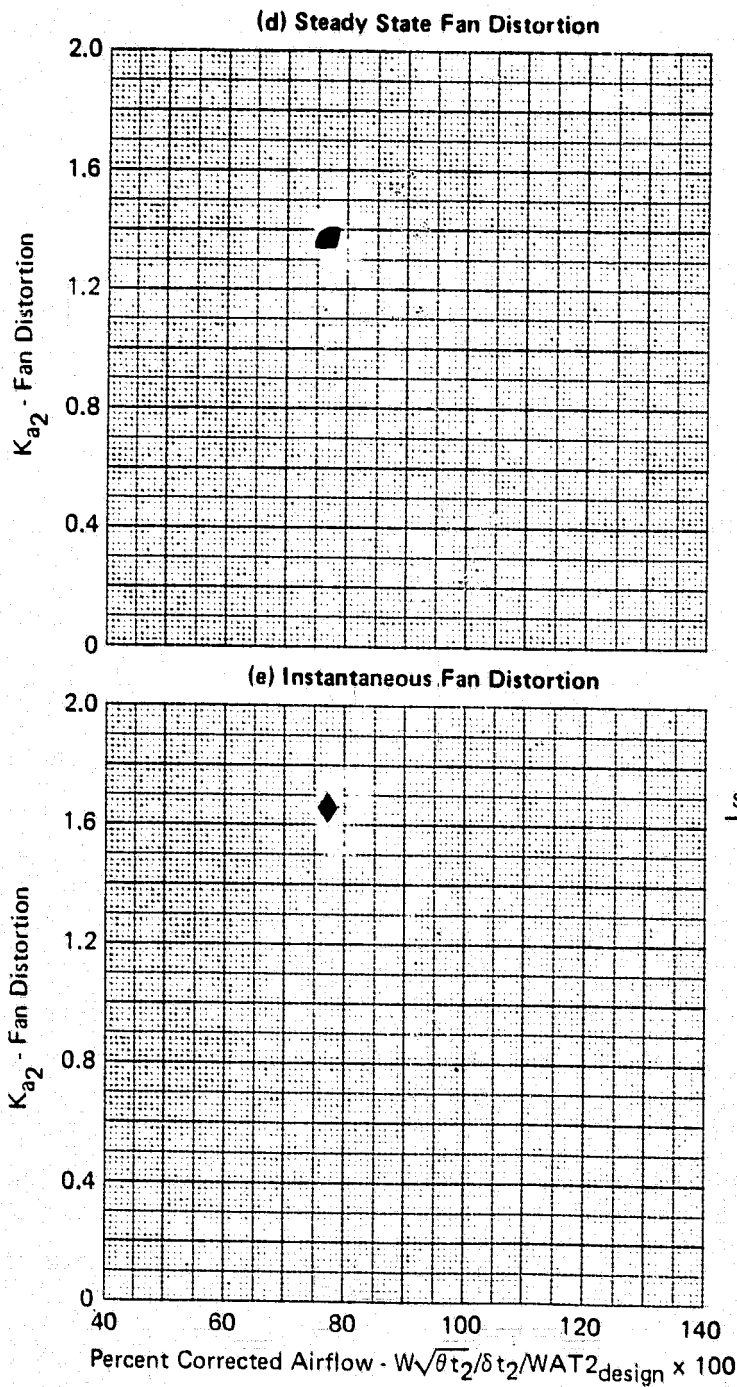


GP77-0658-5

FIGURE G-8 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.60$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 76.6\%$

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SERIES VII - NASA Data Study
 Part/Point - 112/7, Ident 8
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -25.00



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FIGURE G-8 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.60$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 76.6\%$

SERIES VII - NASA Data Study
 Part/Point - 112/7, Ident 8
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -25.00

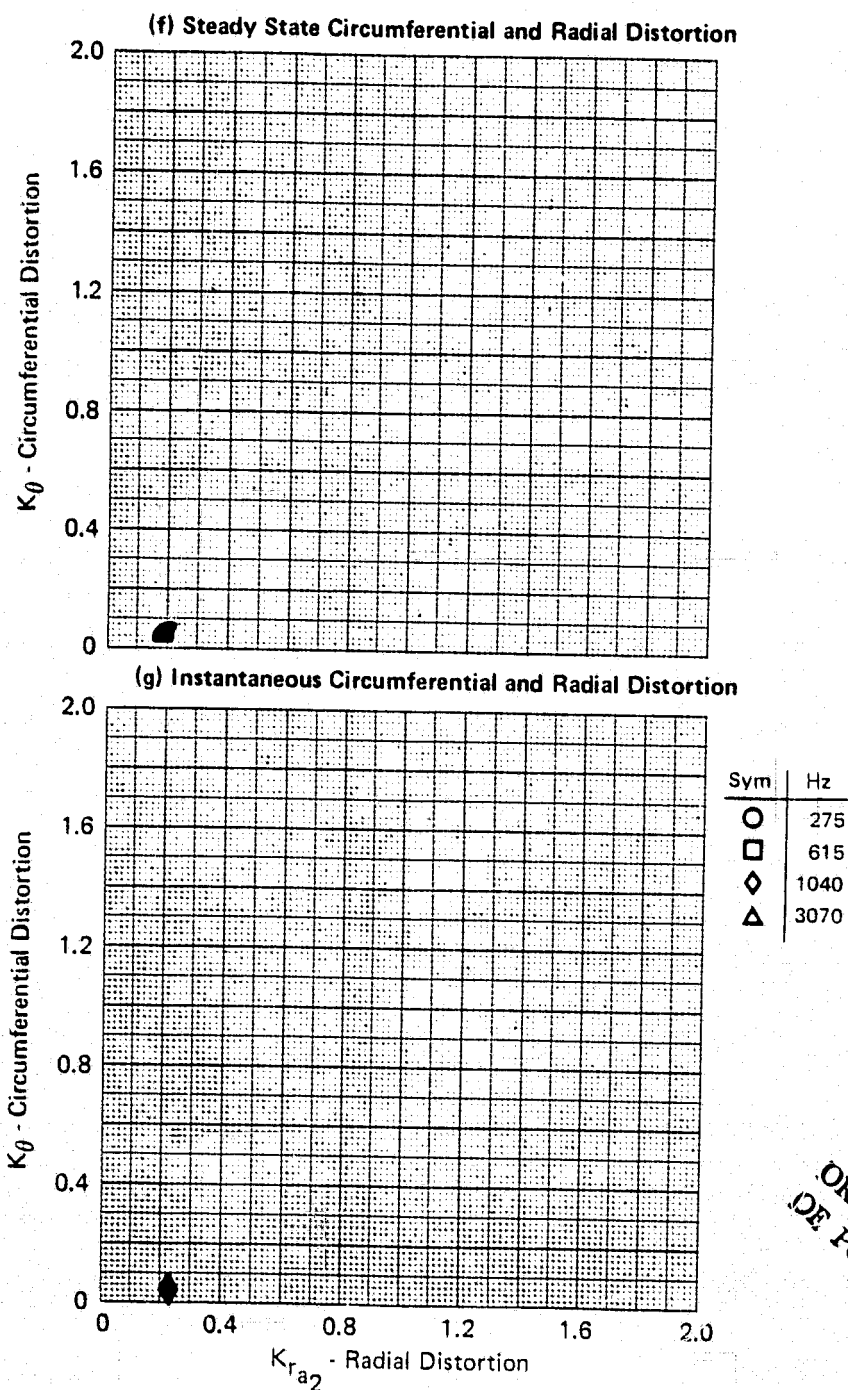


FIGURE G-8 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 76.6 %

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SERIES VII - NASA Data Study
Part/Point - 112/7, Ident 8

RHO DELTA3 BYPASS CIVV
7.0 10.6 0.0 -25.00

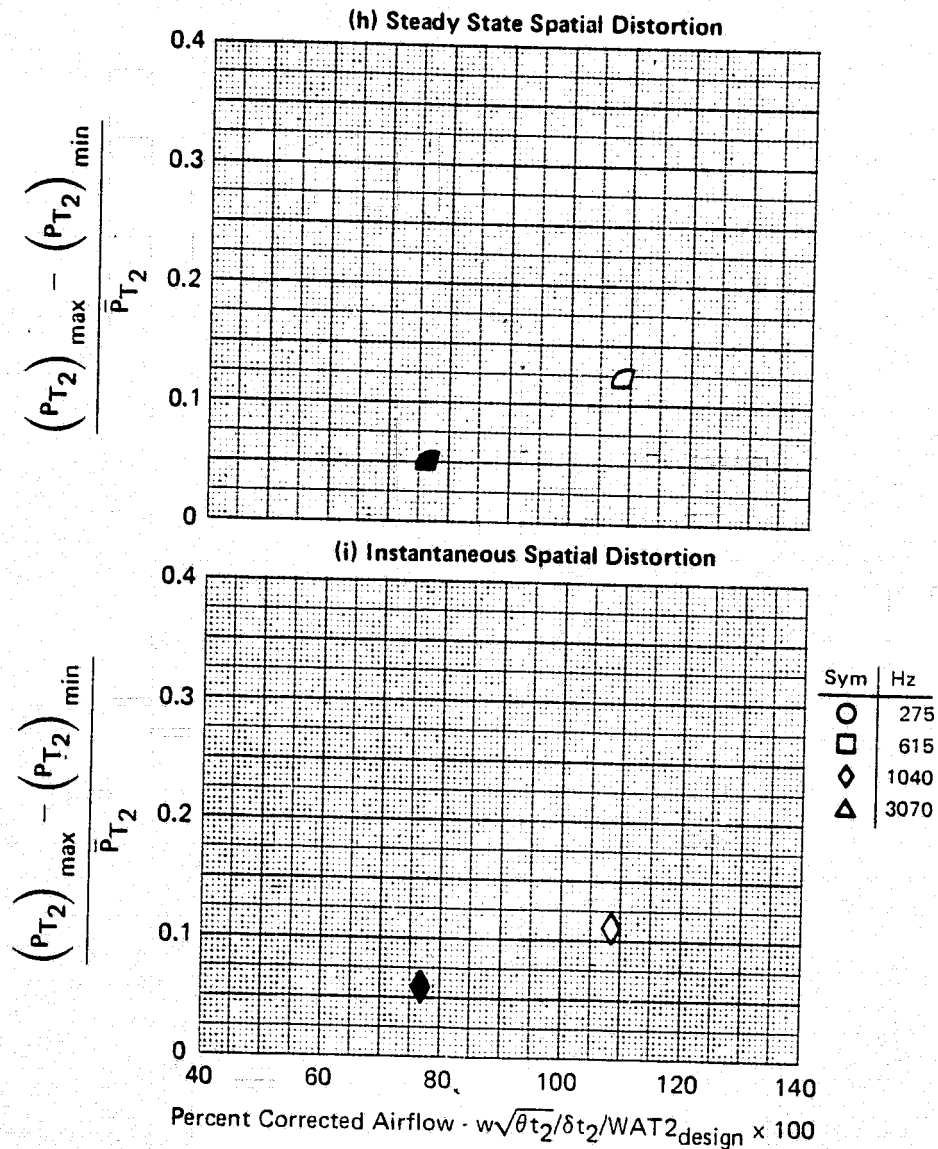


FIGURE G-8 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.60$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 76.6\%$

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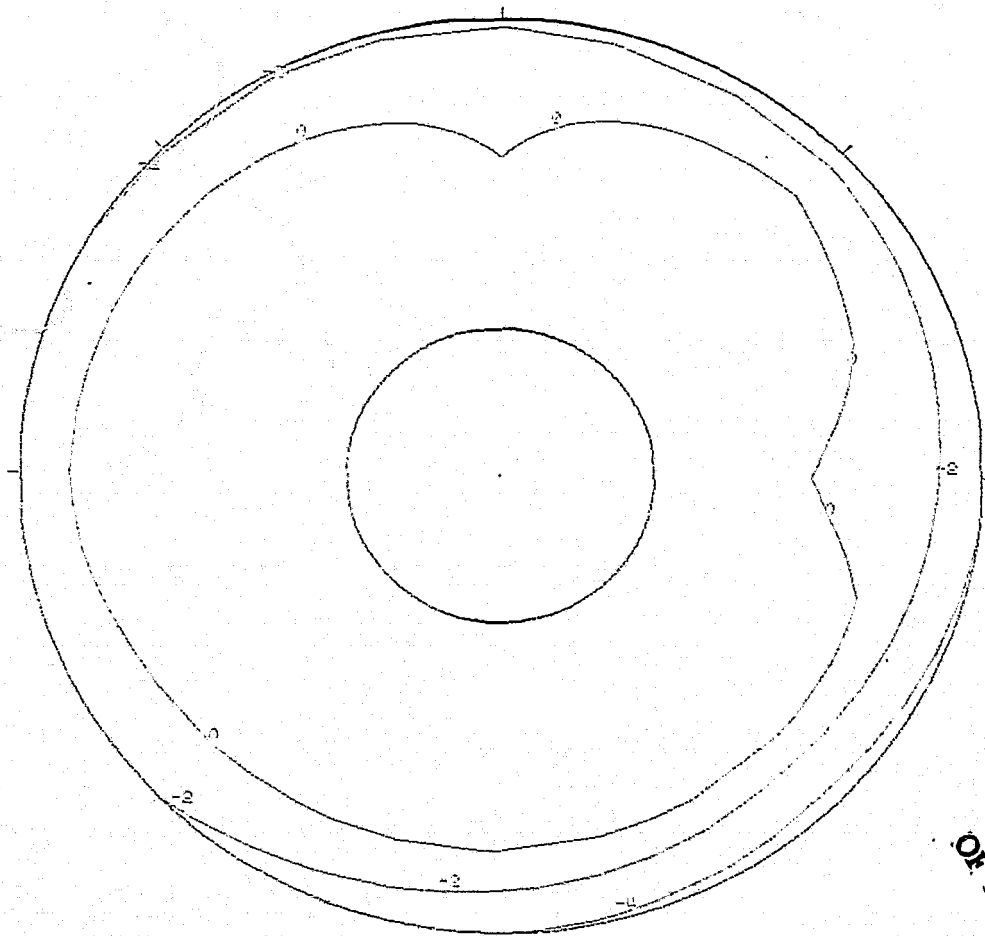
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 112 / 7 IDENT. 8
THE SEGMENT START TIME WAS AT 21:59:12.052

MACH 0.6	ALPHA 4	BETA 0	RHO 7.3	DELTA3 10.8	BYPASS 0.0	WAT2 76.6%	CIVV -25.9
PI 80.54(11.682)	PI/PS 1.000	KTHETA 0.054	KPA2 2.133	BKPA2 1.317	KQ2 1.370	KQ3 0.328	KASP 0.023
							D2 0.051

8(j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 80.54 kPa (11.682 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-8 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 76.6$ %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 112 / 7 IDENT. 8
THE SEGMENT START TIME WAS AT 21:54:12.052

MACH
0.6

ALPHA
4.0

BETA
0.0

BAND
10.0

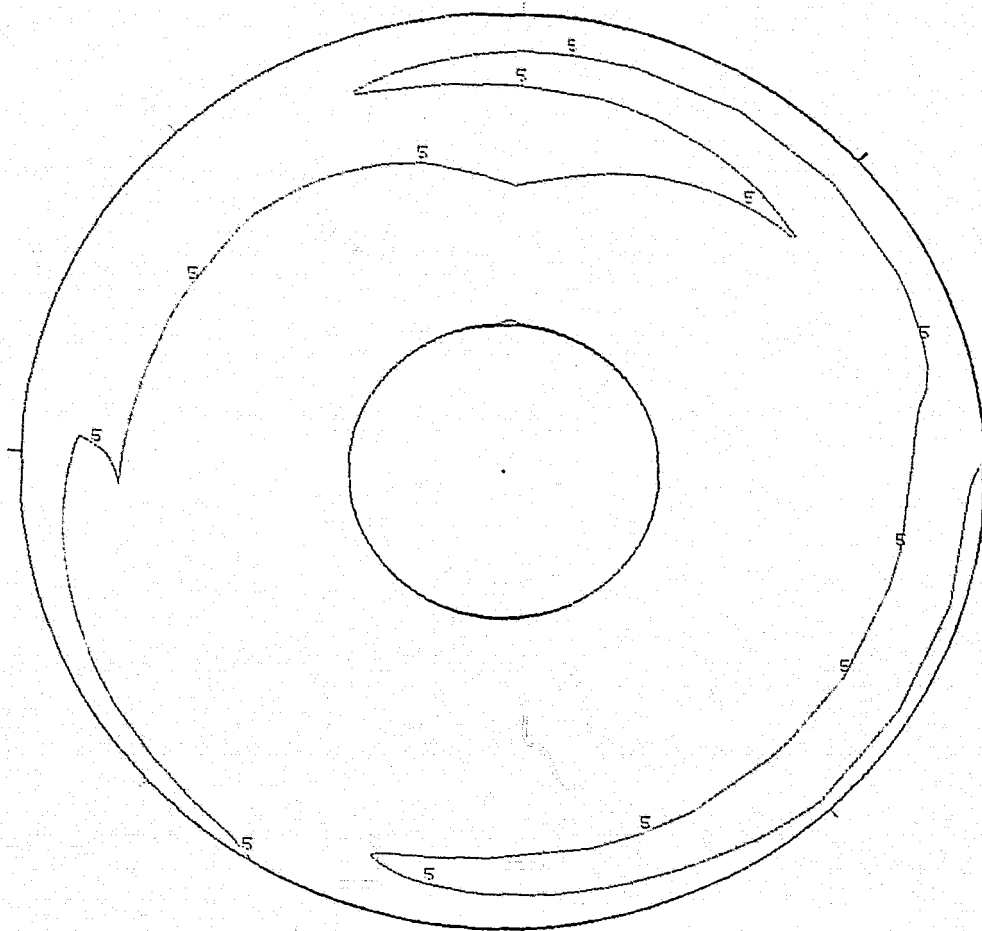
DELTA
10.0

BYPASS
0.0

WAT2
76.6%

CIVV
-25.0

8(k) Turbulence Contour 1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00385

FIGURE G-8 (Continued)

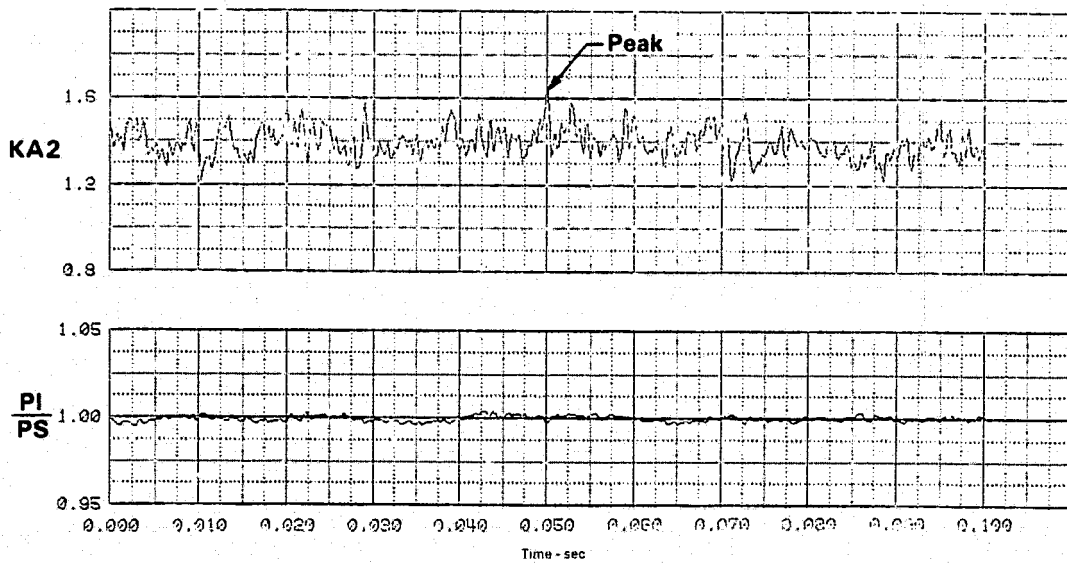
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 76.6%

SERIES VII - NASA DATA STUDY

DATA PART/POINT 112 / 7 IDENT. 8
THE SEGMENT START TIME WAS AT 21:50:12.952

MAOH 0.8	ALPHA 4	BETA 0	RHO 7.3	DEL T23 10.6	BYPASS 0.0	WAT2 76.6%	Q1V -25.9
PI 80.36 (11.655)	PI/PS 0.999	WAT2 0.000	KF02 0.232	FK002 1.817	K02 1.131	K03 0.009	D0 0.059

8(I) Time History Plots 1040 Hz



PEAK AT TIME = 0.049995 SECONDS

FIGURE G-8 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 76.6%

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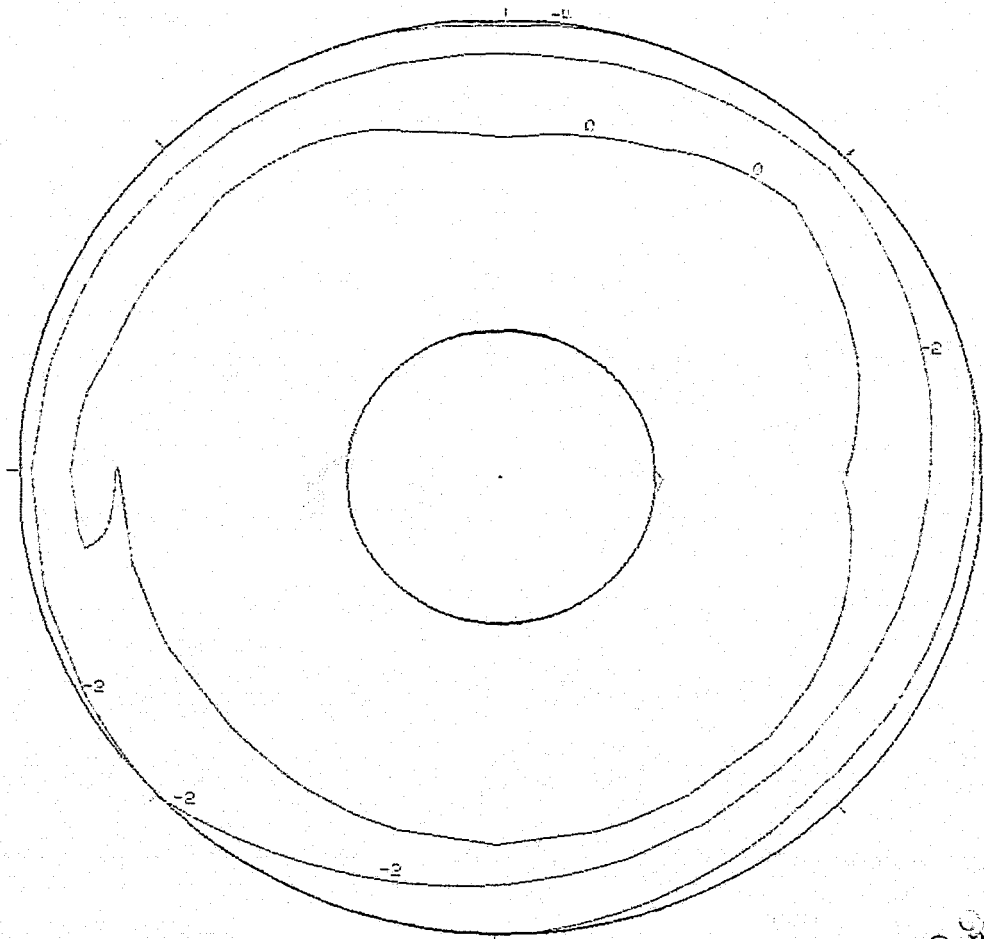
SERIES VII - NASA DATA STUDY

DATA PART/POINT 112 / 7 IDENT. 8
THE SEGMENT START TIME WAS AT 21:50:12.000

MOCH	ALPHA	BETA	CHQ	DELTA	EXPRES	WAT2	GIVV
0.8	4	0	0.0	13.6	0.0	76.6%	-28.3

DT	P1/P2	KTHETA	KPA2	BKPA2	KQ2	KQ3	KOSP	D2
80.36 (11.655)	0.332	0.001	0.232	1.617	1.321	0.039	0.019	0.059

8(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 1040 Hz



MEAN FACE PRESSURE = 80.36 kPa (11.655 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.049995 SECONDS

FIGURE G-8 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 76.6 %

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SERIES VII - NASA Data Study
Part/Point - 112/5, Ident 9

RHO	DELTA3	BYPASS	CIVV
7.0	10.6	0.0	-5.00

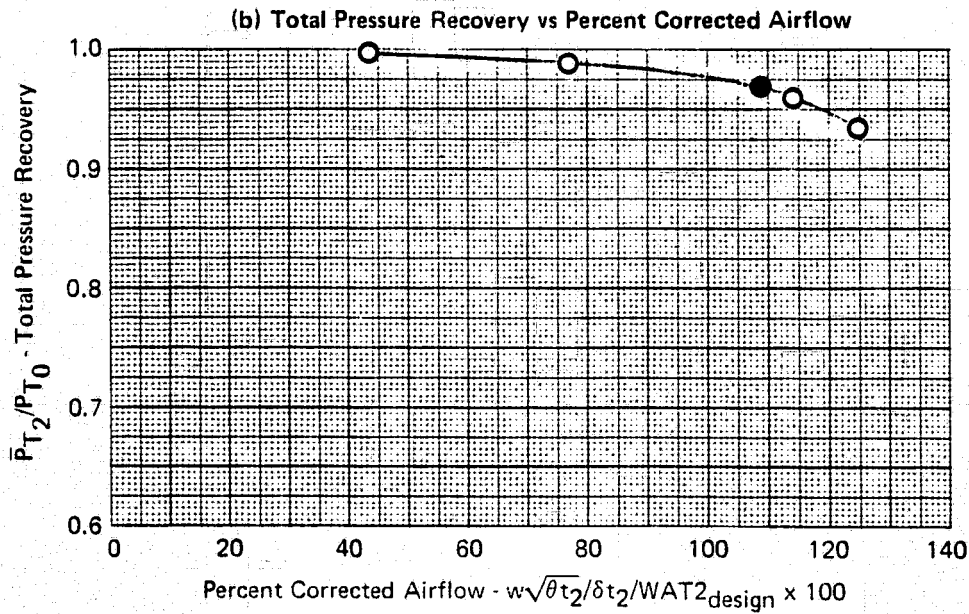
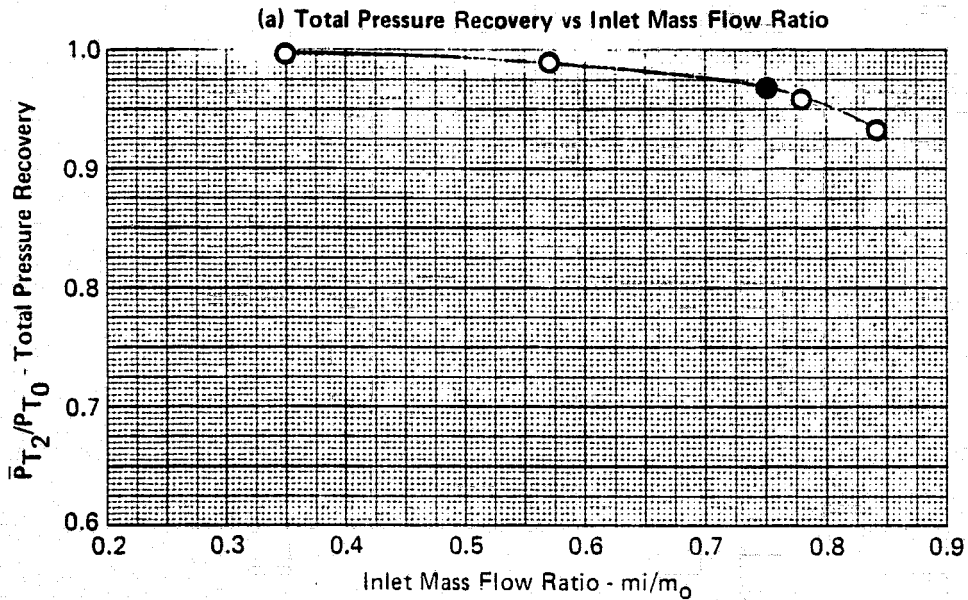
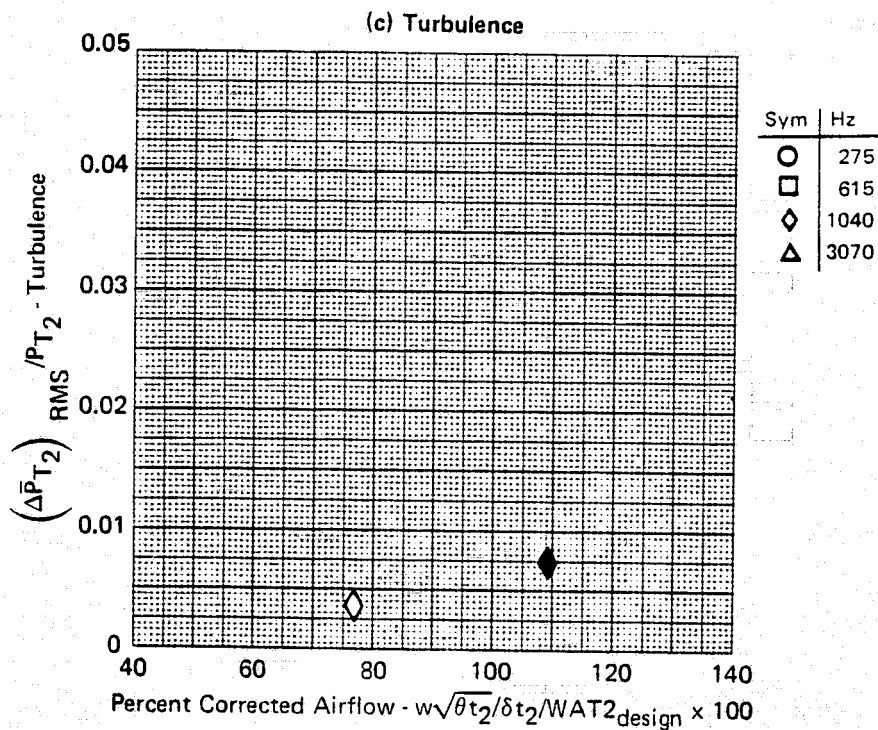


FIGURE G-9
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.60$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 108.6\%$

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SERIES VII - NASA Data Study
 Part/Point - 112/5, Ident 9
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -5.00

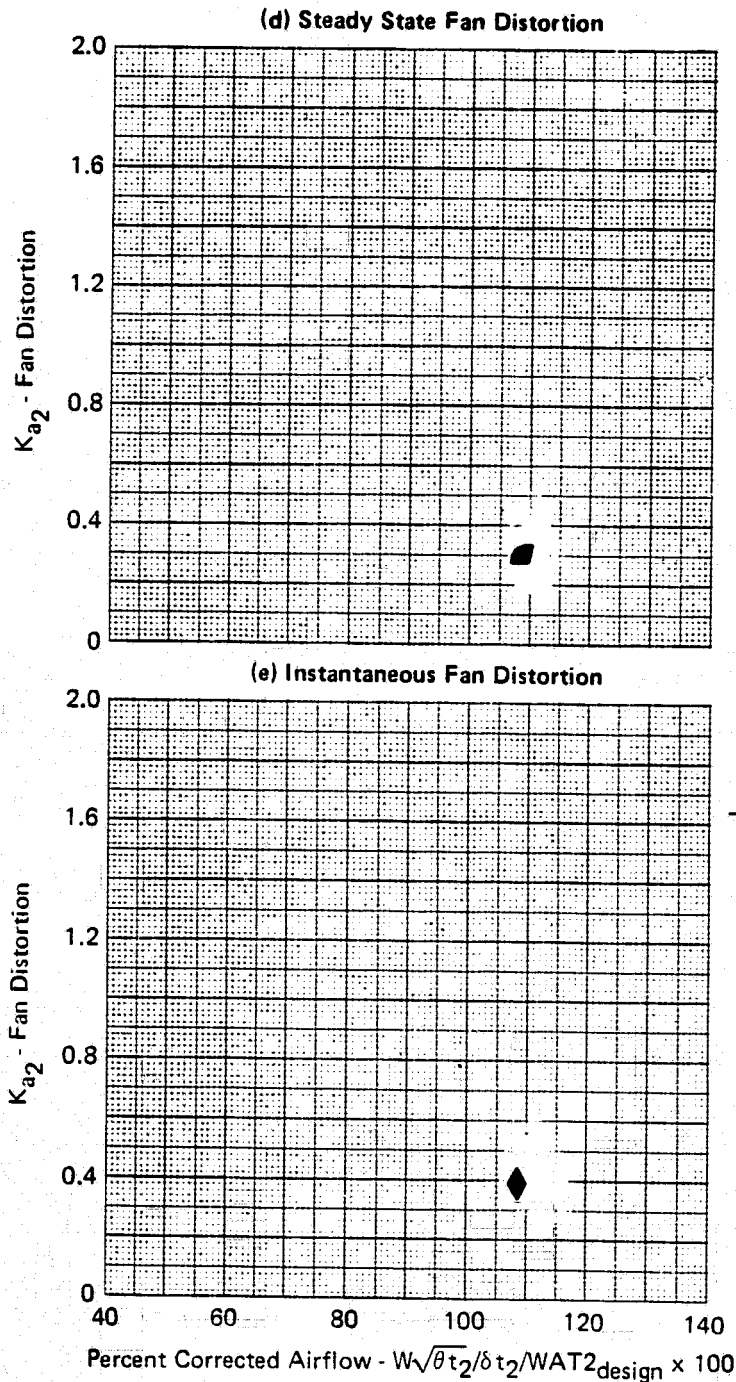


GP77-0658-5

FIGURE G-9 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.60$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 108.6\%$

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SERIES VII - NASA Data Study
 Part/Point - 112/5, Ident 9
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -5.00



GP77-0658-3

FIGURE G-9 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60, \alpha = 4.0, \beta = 0.0, WAT2 = 108.6 \%$

SERIES VII - NASA Data Study
 Part/Point - 112/5, Ident 9
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -5.00

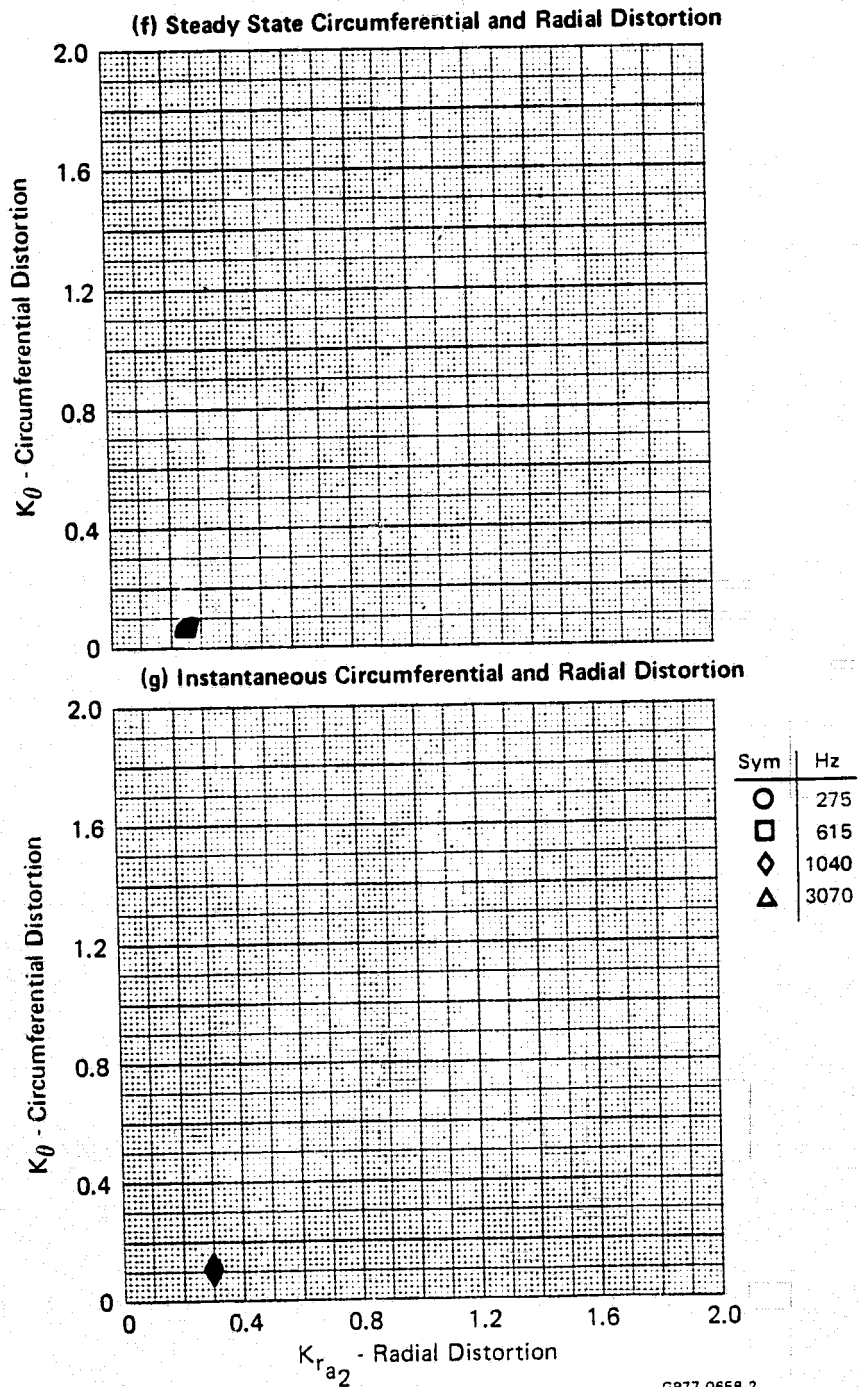
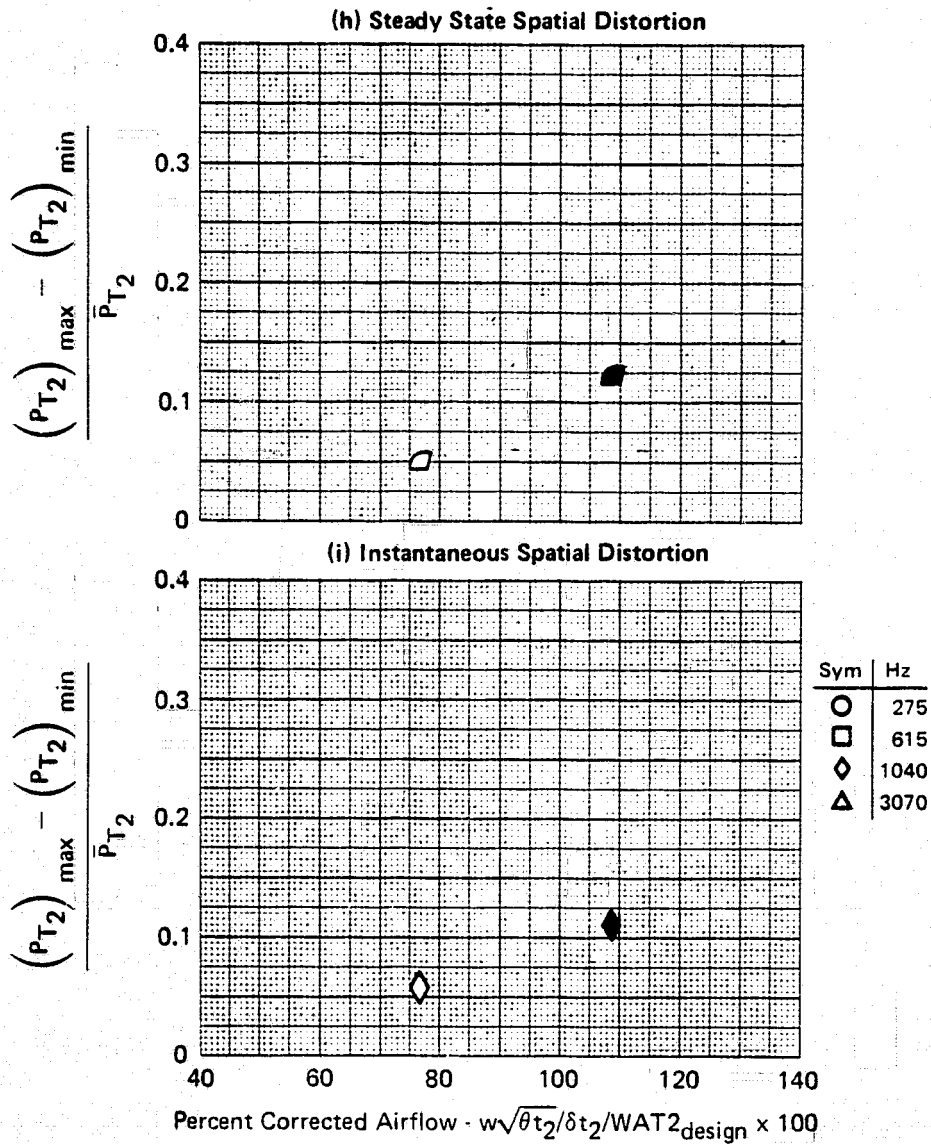


FIGURE G-9 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.60$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 108.6 %

SERIES VII - NASA Data Study
 Part/Point - 112/5, Ident 9
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -5.00



GP77-0658-4

FIGURE G-9 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 108.6\%$

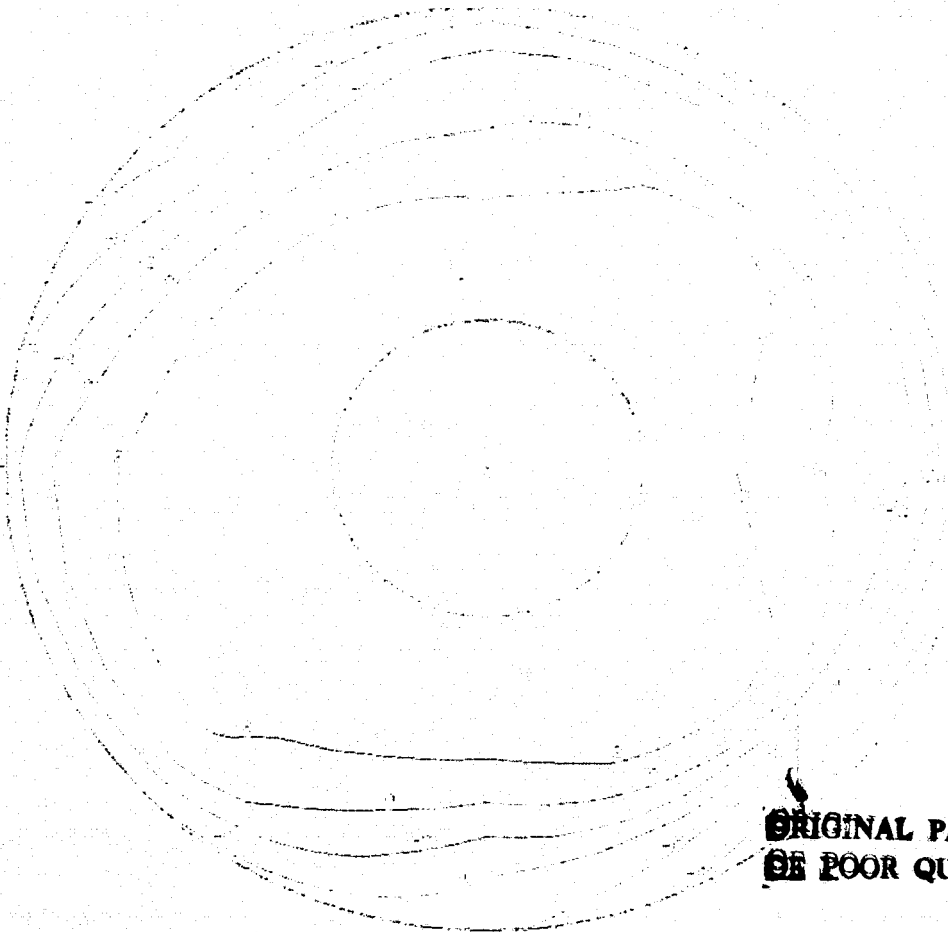
SERIES VII - INLET DATA STUDY

9

108.6%

78.89 (11.442)

9(j) Steady State Total Pressure Contour



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MEAN FACE PRESSURE = 78.89 kPa (11.442 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-9 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 108.6 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 112 / 5 IDENT. 9
THE SEGMENT START TIME WAS AT 21:56:45.065

MACH
0.6

ALPHA
4

BETA
3

RHO
7.0

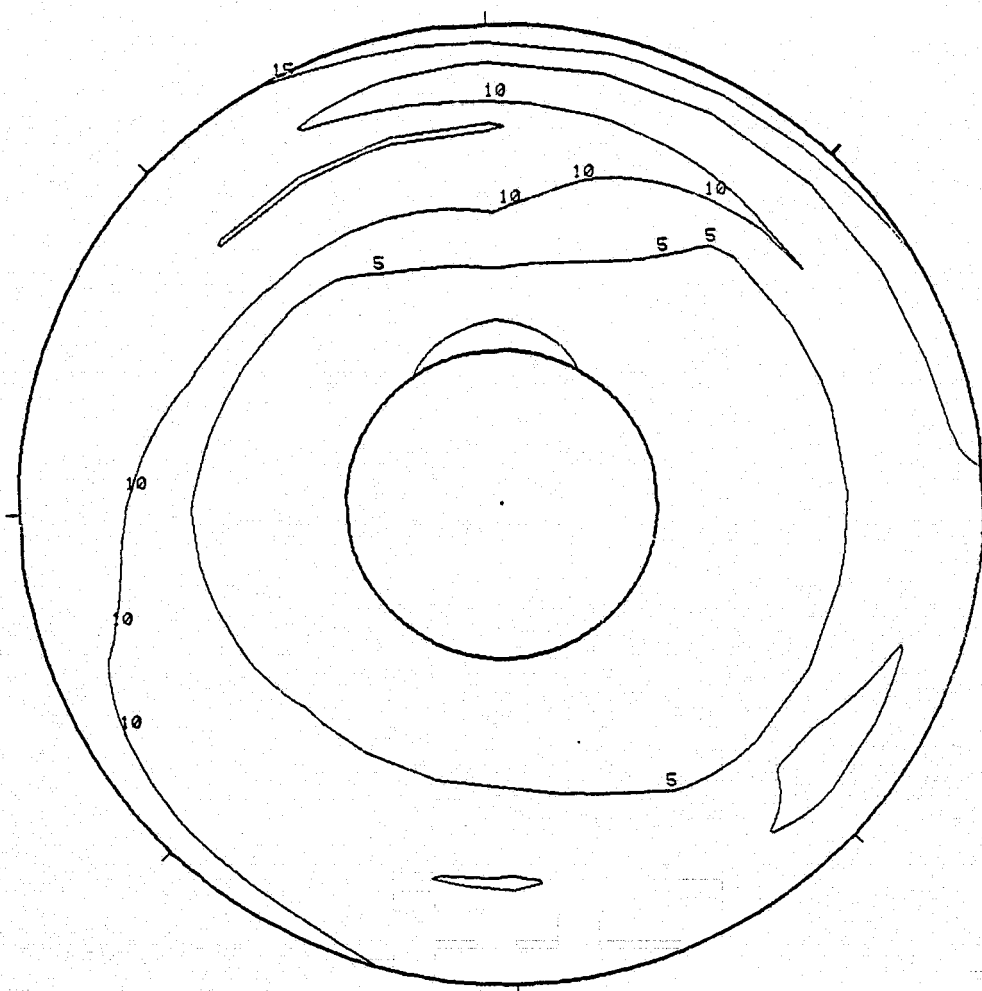
DELTA3
10.6

BYPASS
0.0

WAT2
108.6%

CIVV
-5.9

9(k) Turbulence Contour 1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT ORIGINAL PAGE IS
AVERAGE TURBULENCE = .00739 OF POOR QUALITY

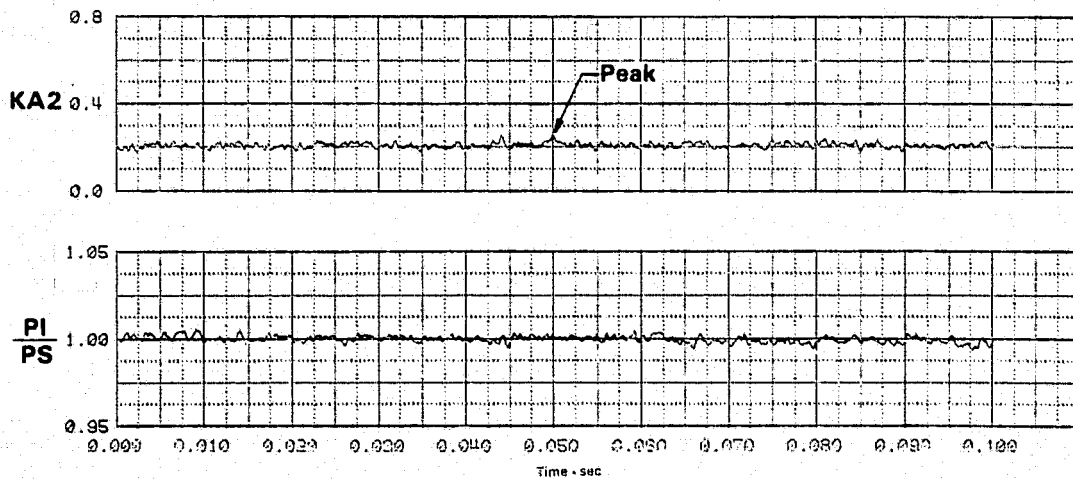
FIGURE G-9 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 108.6 %

SERIES VII - NASA DATA STUDY

DATA/POINT 112/5 IDENT 9
THE SEGMENT START TIME WAS AT 21 = 56:45.065

MACH 0.6	ALPHA 0.4	BETA 0	RHO 7.0	DELTA3 10.6	BYPASS 0.0	WAT2 108.6%	CIVV -5.0
PI 79.06 (11.466)	PI/PS 1.002	KTHETA .074	KRA2 .198	BKRA2 .184	KA2 .258	KC2 .038	KOSP .033
							D2 .110

**9(I) Time History Plots
1040 Hz**



PEAK AT TIME = 0.049995 SECONDS

**FIGURE G-9 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 108.6%**

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DATE REPORTED: 11/1/68 PAGE: 9
THE ELEMENT REPORT DATE: 11/1/68

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114

FSE - NASA Data Study
 Part/Point - 116/2, Ident 10
 RHO DELTA3 BYPASS CIVV
 5.2 10.0 0.0 -11.00

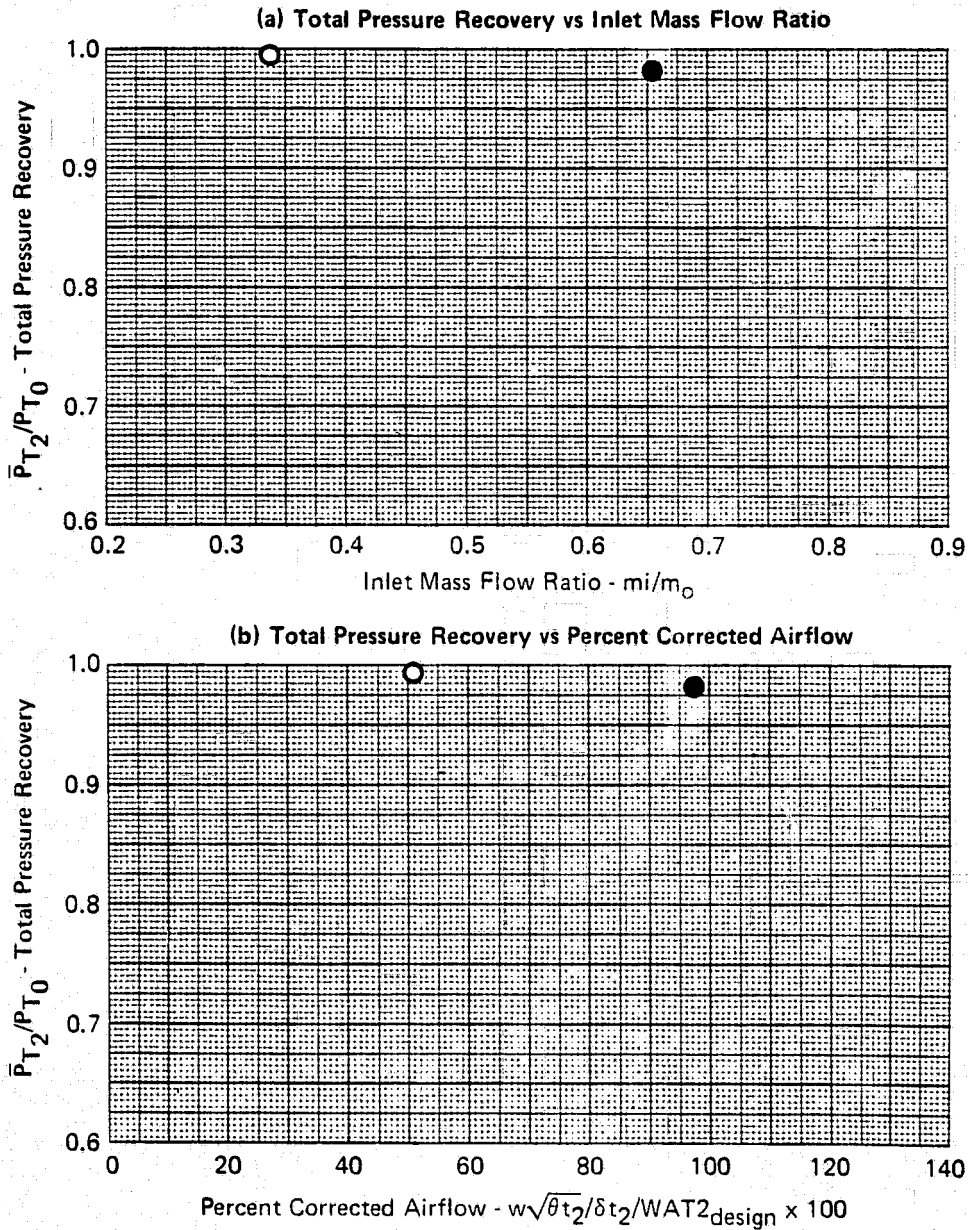
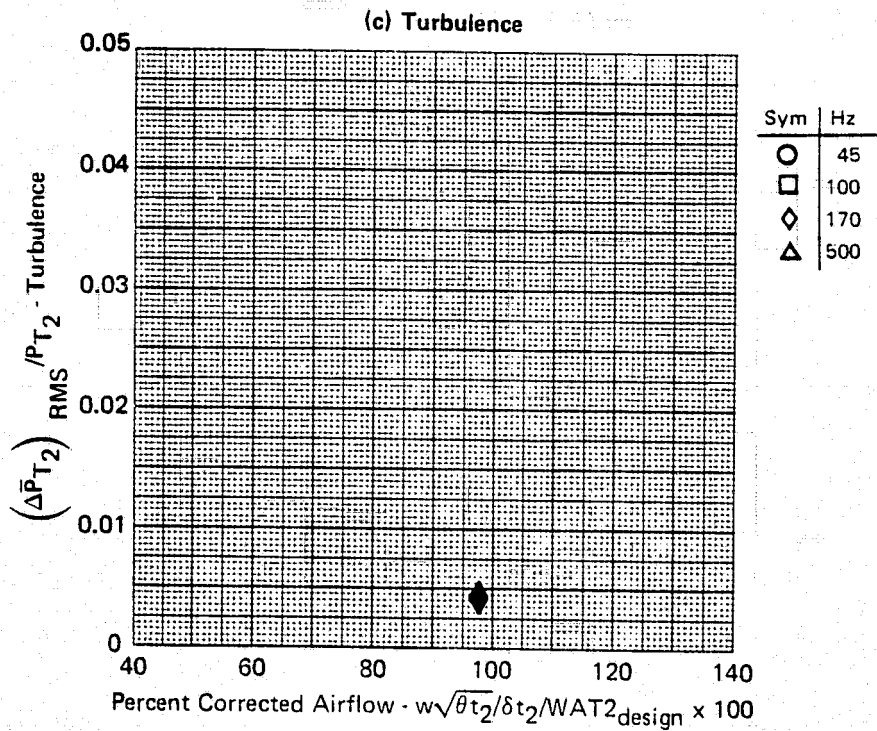


FIGURE G-10
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60, \alpha = 4.0, \beta = 0.0, WAT2 = 97.7\%$

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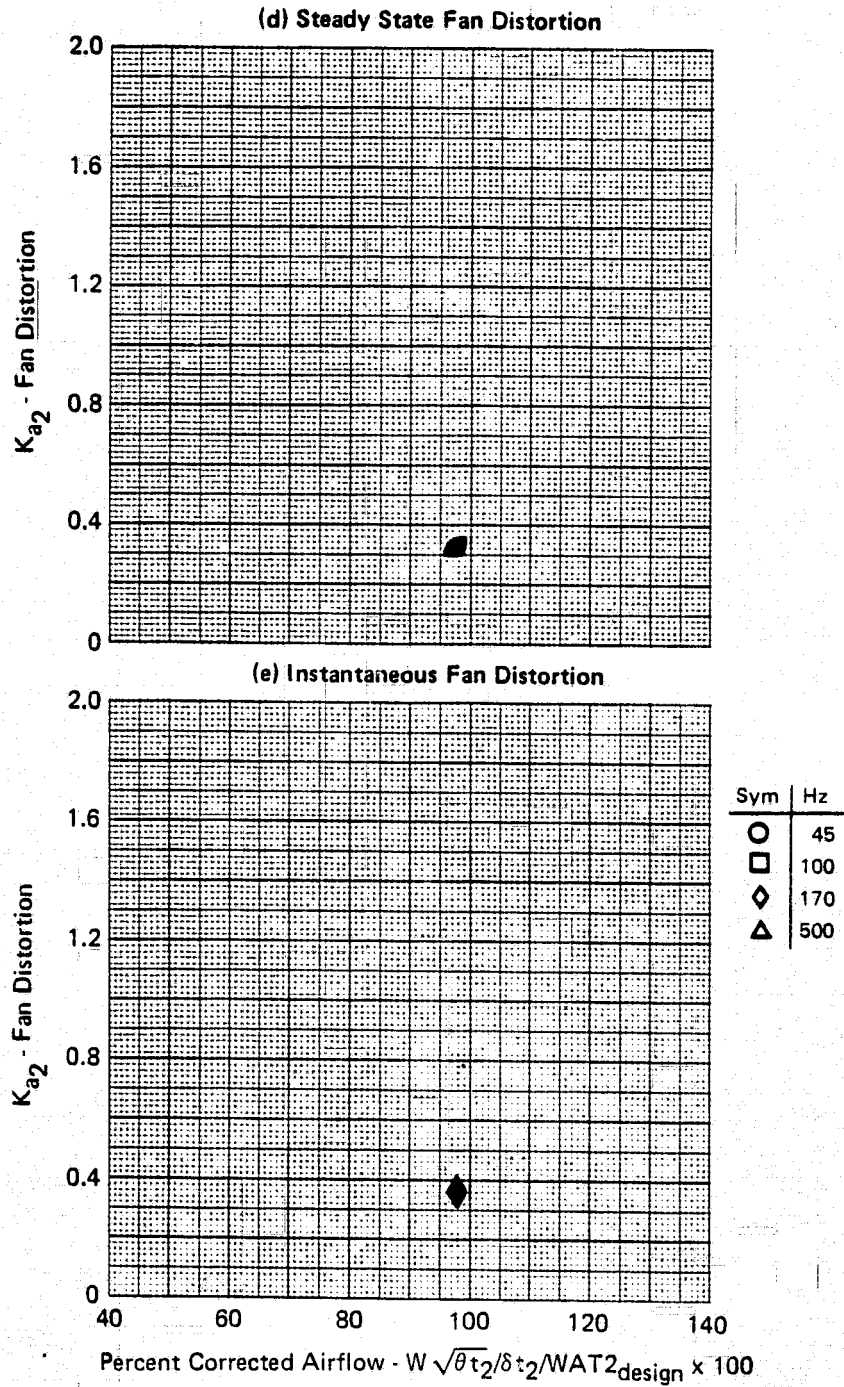
FSE - NASA Data Study
 Part/Point - 116/2, Ident 10
 RHO DELTA3 BYPASS CIVV
 5.2 10.0 0.0 -11.00



GP77-0658-5

FIGURE G-10 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60, \alpha = 4.0, \beta = 0.0, WAT2 = 97.7 \%$

FSE - NASA Data Study
 Part/Point - 116/2, Ident 10
 RHO DELTA3 BYPASS CIVV
 5.2 10.0 0.0 -11.00



GP77-0658-3

FIGURE G-10 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60, \alpha = 4.0, \beta = 0.0, WAT2 = 97.7 \%$

FSE - NASA Data Study
 Part/Point - 116/2, Ident 10
 RHO DELTA3 BYPASS CIVV
 5.2 10.0 0.0 -11.00

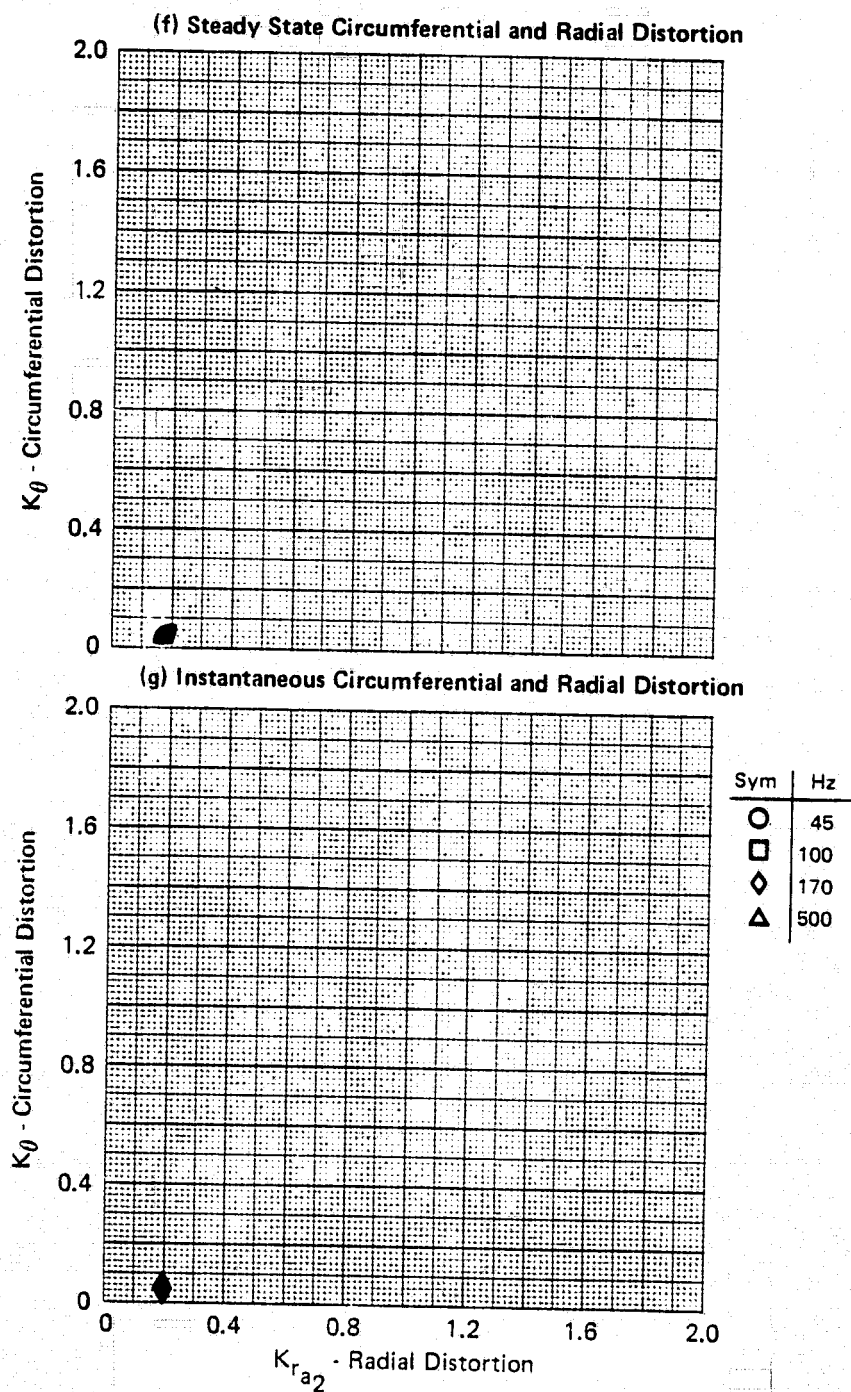
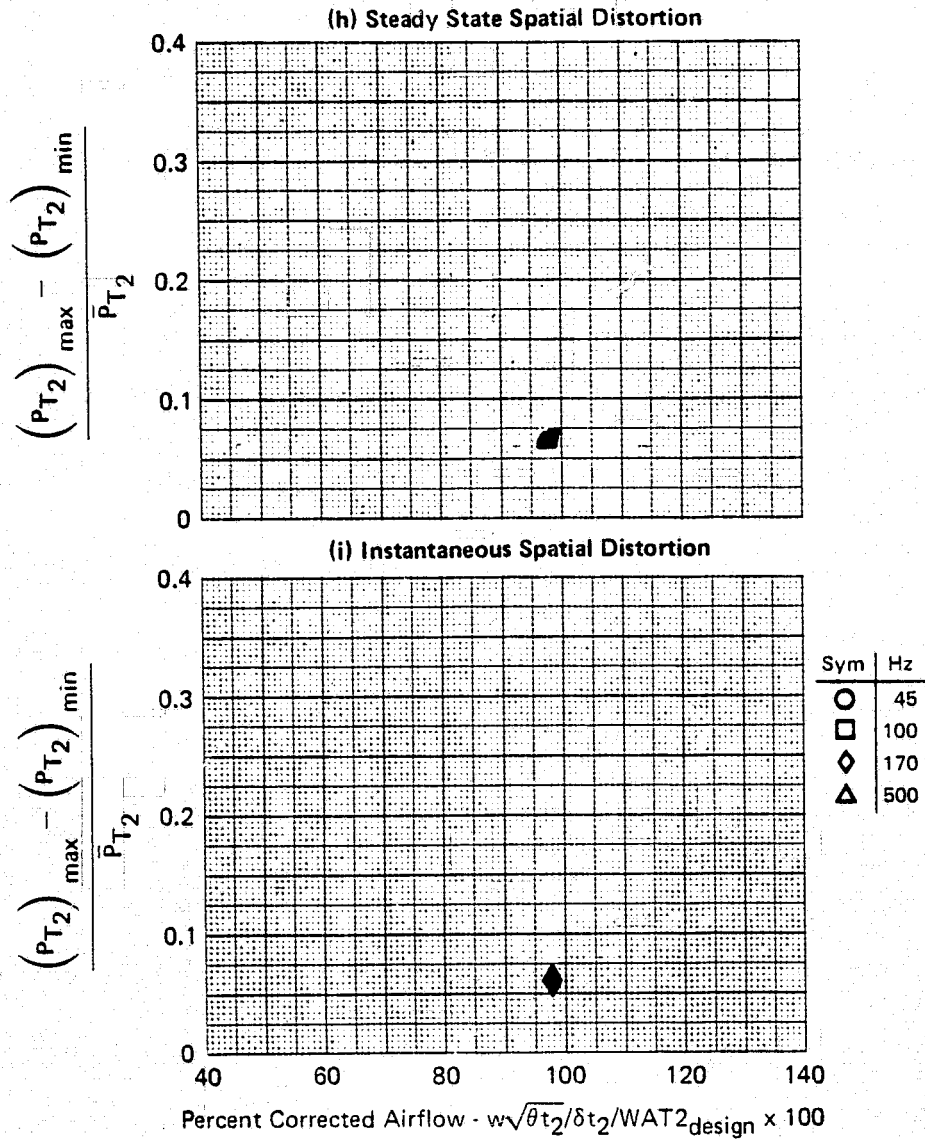


FIGURE G-10 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.60$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 97.7 %

FSE - NASA Data Study
 Part/Point - 116/2, Ident 10
 RHO DELTA3 BYPASS CIVV
 5.2 10.0 0.0 -11.00



GP77-0658-4

FIGURE G-10 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.60, \alpha = 4.0, \beta = 0.0, WAT2 = 97.7\%$

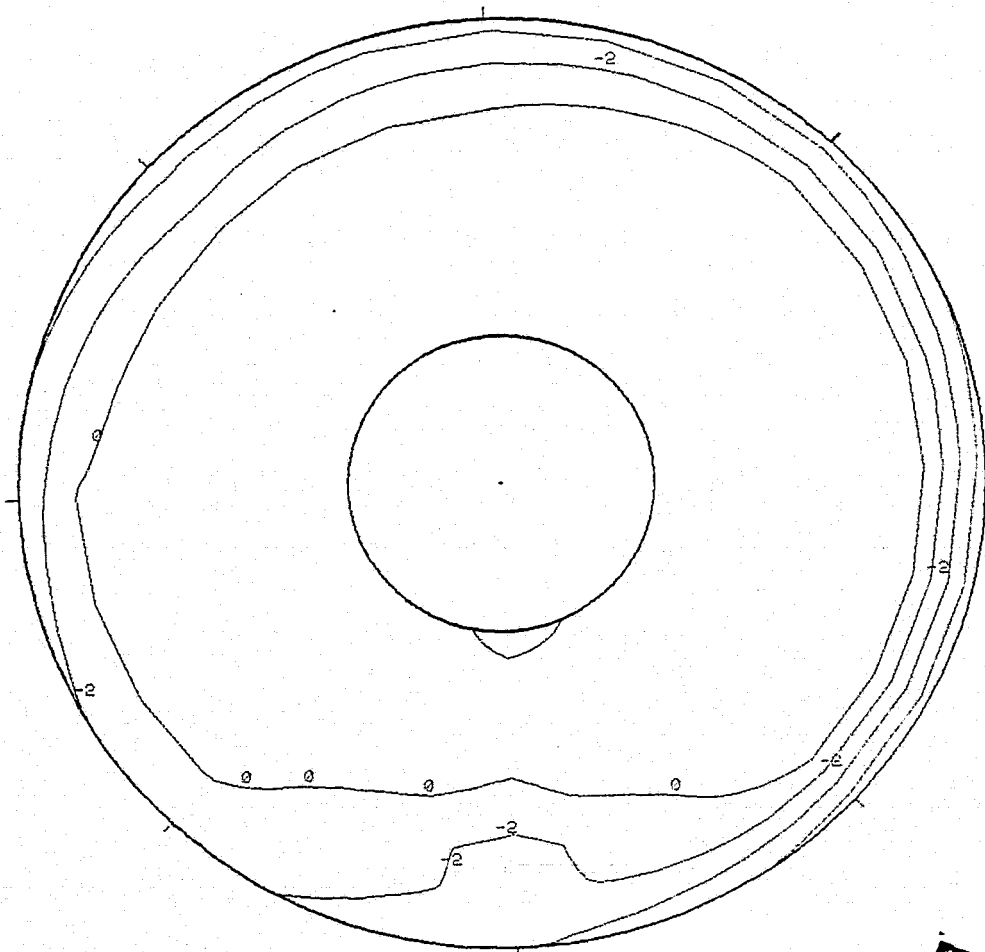
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FSE - NASA DATA STUDY

DATA PART/POINT 116 / 2 IDENT. 10
THE SEGMENT START TIME WAS AT 0:29:49.600

MACH 0.6	ALPHA 4	BETA 0	RHO 5.2	DELTA3 10.0	BYPASS 0.0	WAT2 97.7%	CIVV -11.0
PI 97.80 (14.184)	P1/PS 1.000	KTHETA 0.037	KPA2 0.175	BKPA2 0.224	KA2 0.321	KC2 0.034	KESP 0.023
							D2 0.064

10 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 97.80 kPa (14.184 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-10 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 97.7 %

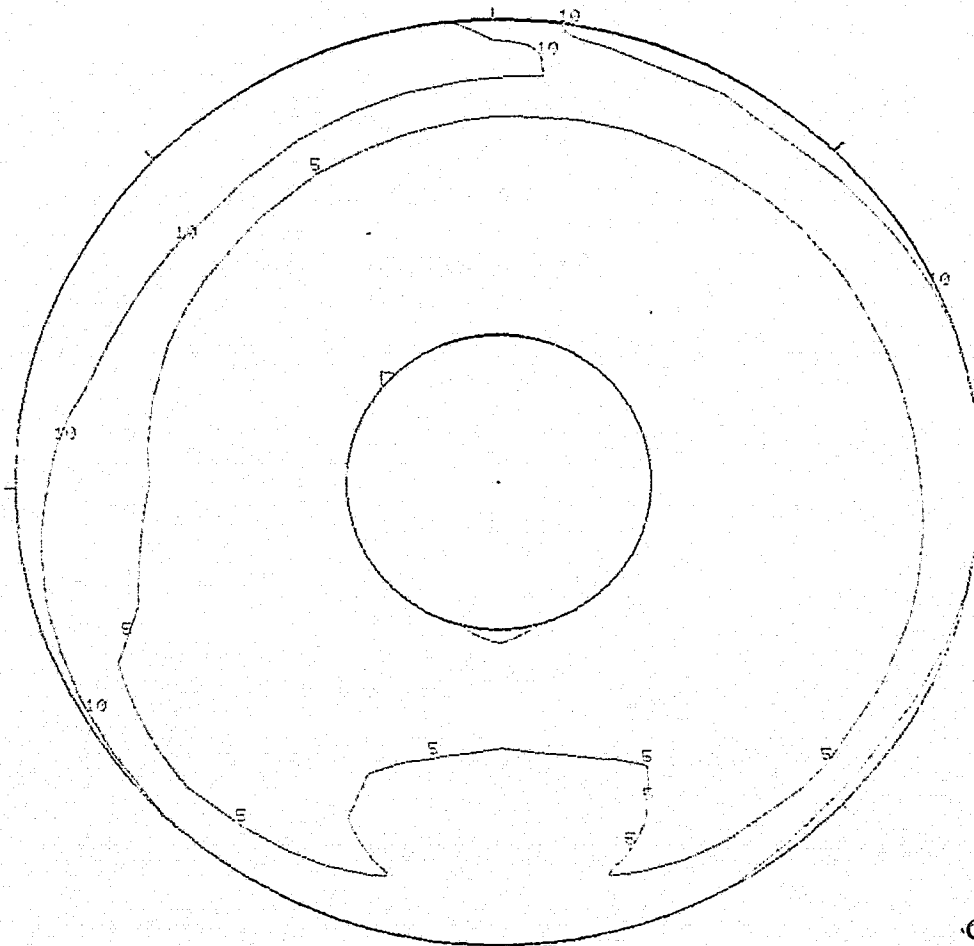
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FSE - NASA DATA STUDY

DATA PART/POINT 116 / 2 IDENT. 10
THE SEGMENT START TIME WAS AT 0:39:49.600

MACH	ALPHA	BETA	BW0	DELTA2	BYPASS	WAT2	CIVV
0.6	4	0	0.0	10.0	0.0	97.7%	-11.0

10(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00438

FIGURE G-10 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 97.7\%$

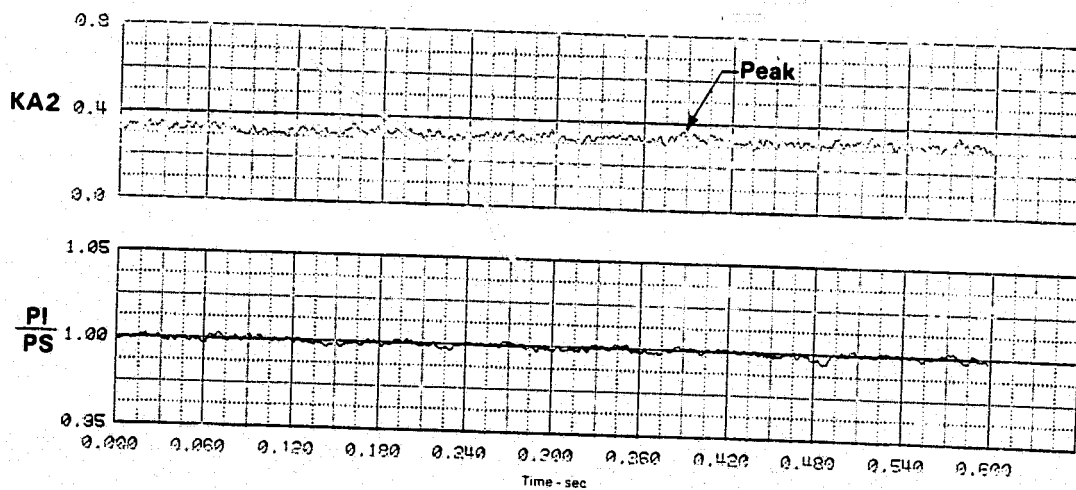
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FSE - NASA DATA STUDY

DATA PART/POINT 116 / 2 IDENT. 10
THE SEGMENT START TIME WAS AT 2:33:49.000

MACH 0.6	ALPHA 4.0	BETA 0.0	BH0 5.2	DELTA2 10.0	BYPASS 0.0	WAT2 97.7%	CIVV -11.0
OT 97.98 (14.211)	PI/PS 1.000	KTHETA 0.000	KPA2 0.133	BKPA2 0.013	KA2 0.350	KC2 0.000	KOSP 0.000
							D2 0.001

10 (I) Time History Plots 170 Hz



PEAK AT TIME = 0.387356 SECONDS

FIGURE G-10 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 97.7%

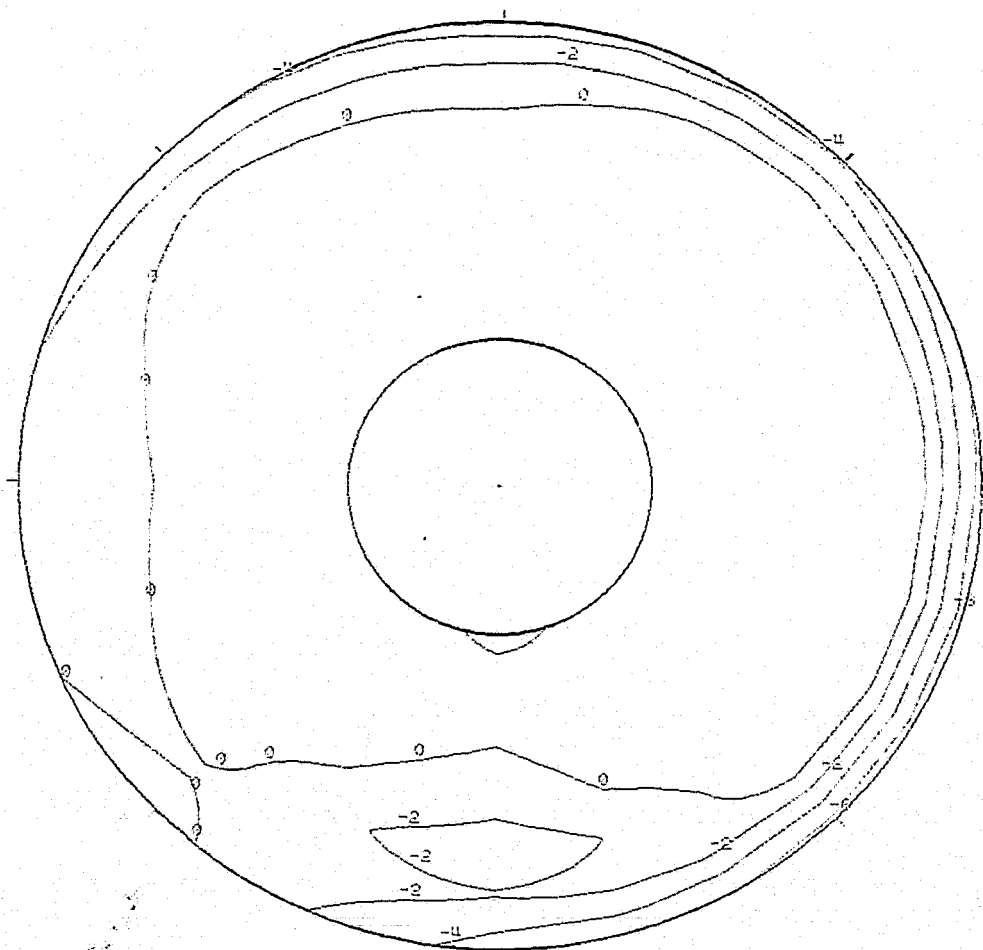
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FSE - NASA DATA STUDY

DATA PART/POINT 116 / 2 IDENT. 10
THE SEGMENT START TIME WAS AT 0:39:48.600

MACH 0.6	ALPHA 4	BETA 0	RHO 5.2	DELTA3 10.3	BYPASS 0.0	WAT2 97.7%	CIVV -11.0
97.98 (14.211)	PI/PS 1.032	KTHETA 0.053	KAP2 0.143	BKAP2 0.313	KQ2 0.358	KQ2 0.036	KOSP 0.029
							D2 0.061

10(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 170 Hz



MEAN FACE PRESSURE = 97.98 kPa (14.211 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.387356 SECONDS

FIGURE G-10 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.6$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 97.7 %

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FLIGHT - NASA Data Study
 Part/Point - 424/2, Ident 11
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -16.053

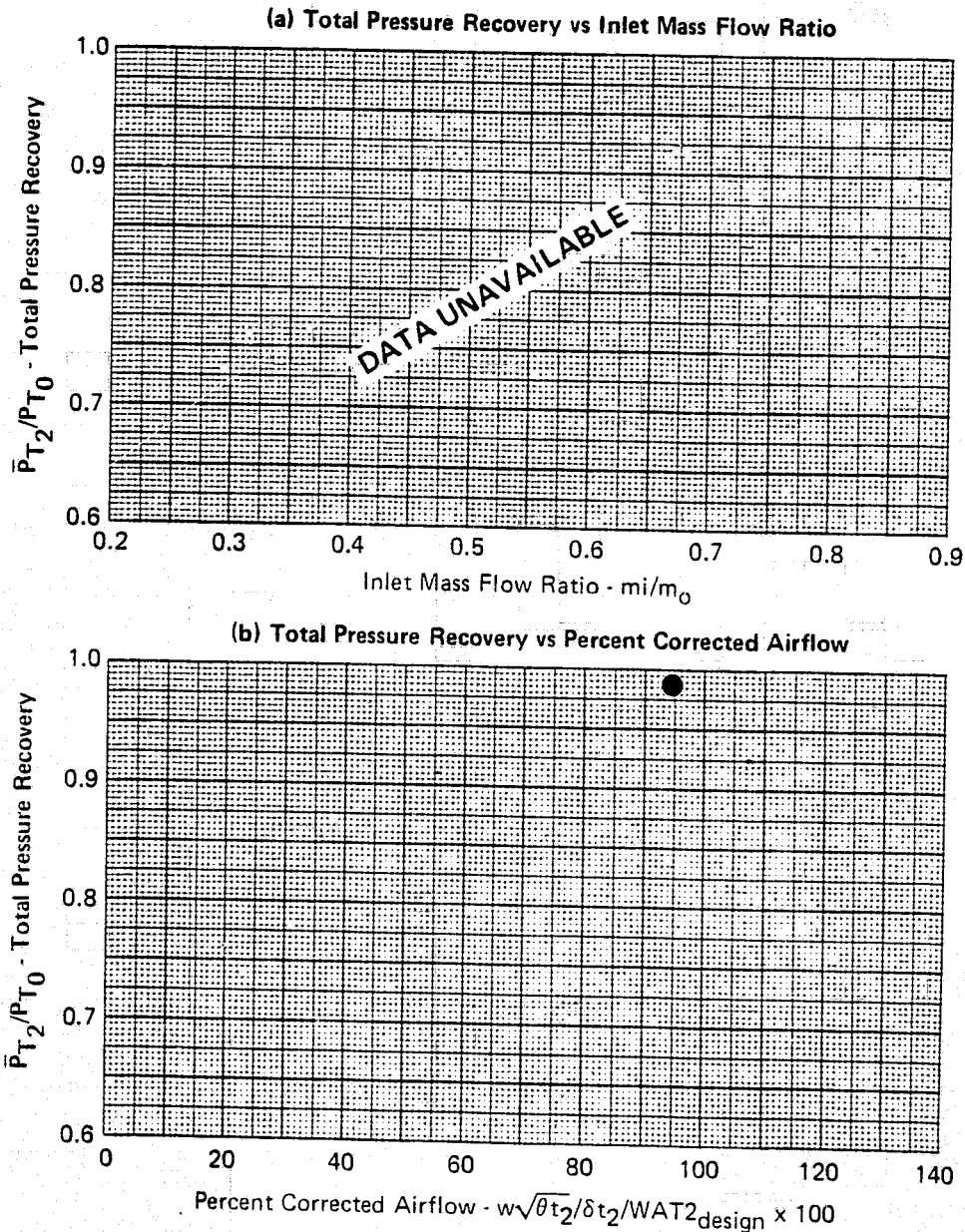
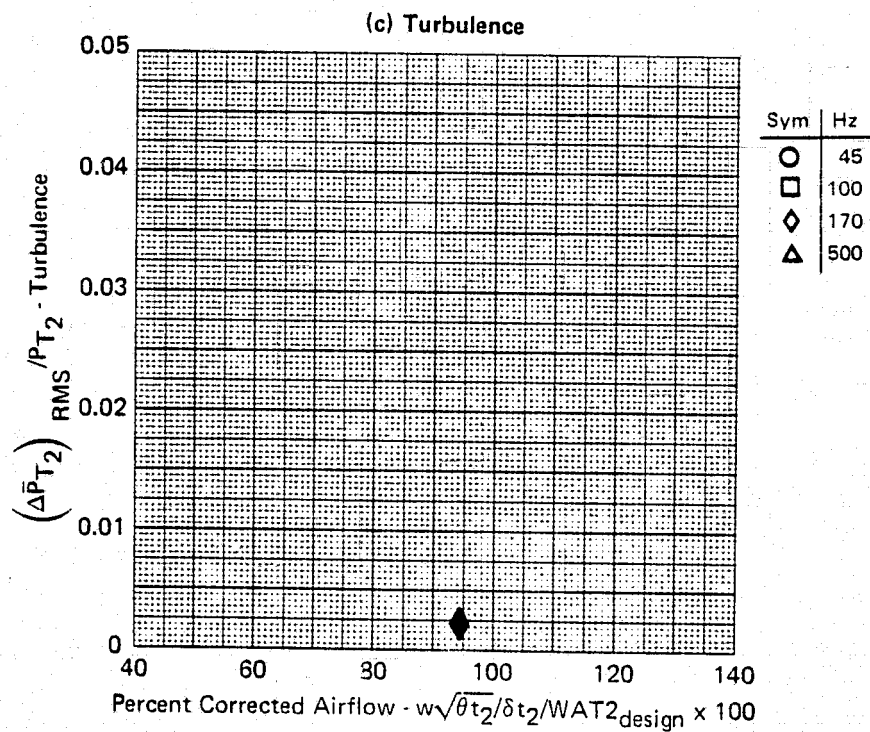


FIGURE G-11
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.67, \alpha = 4.3, \beta = 0.7, WAT2 = 94.4 \%$

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FLIGHT - NASA Data Study
 Part/Point - 424/2, Ident 11
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -16.053



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FIGURE G-11 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.67$, $\alpha = 4.3$, $\beta = 0.7$, $WAT2 = 94.4\%$

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FLIGHT - NASA Data Study
 Part/Point - 424/2, Ident 11
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -16.053

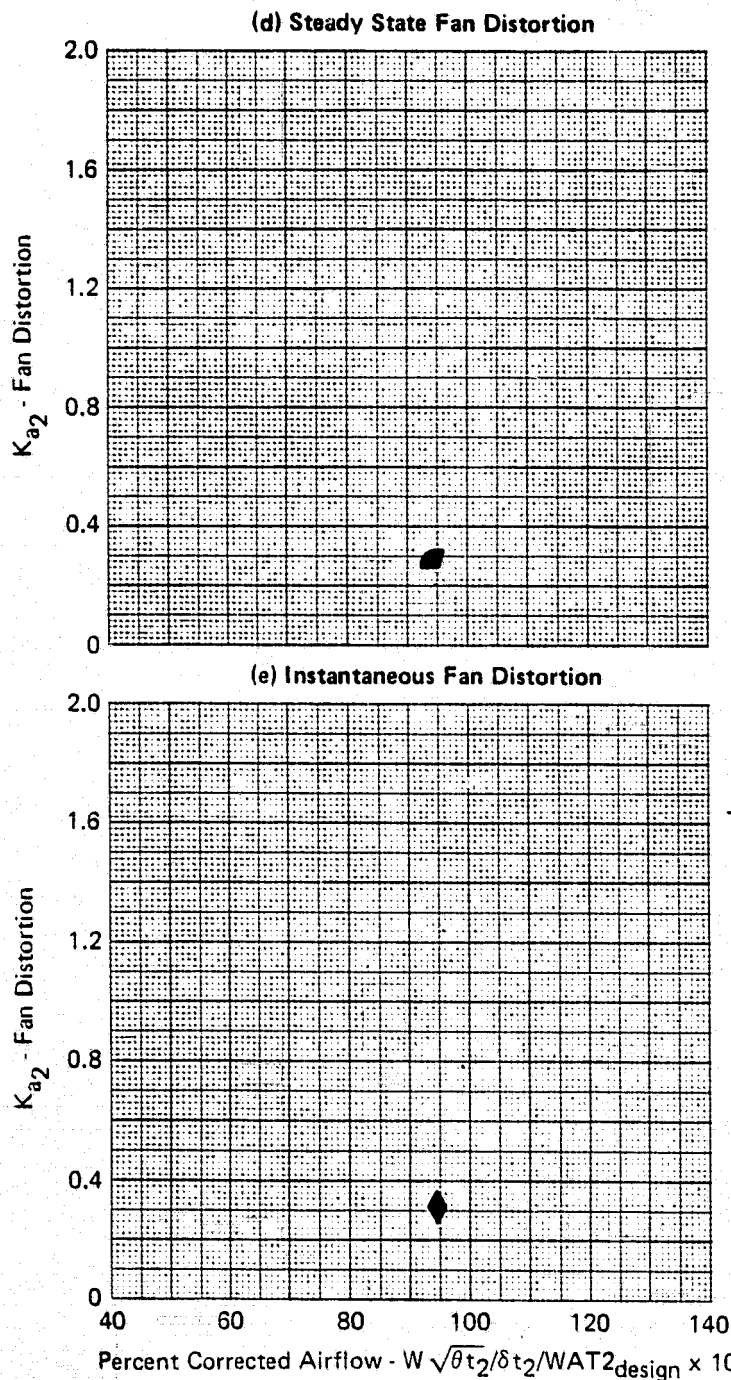


FIGURE G-11 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.67, \alpha = 4.3, \beta = 0.7, WAT2 = 94.4\%$

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FLIGHT - NASA Data Study
 Part/Point - 424/2, Ident 11
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -16.053

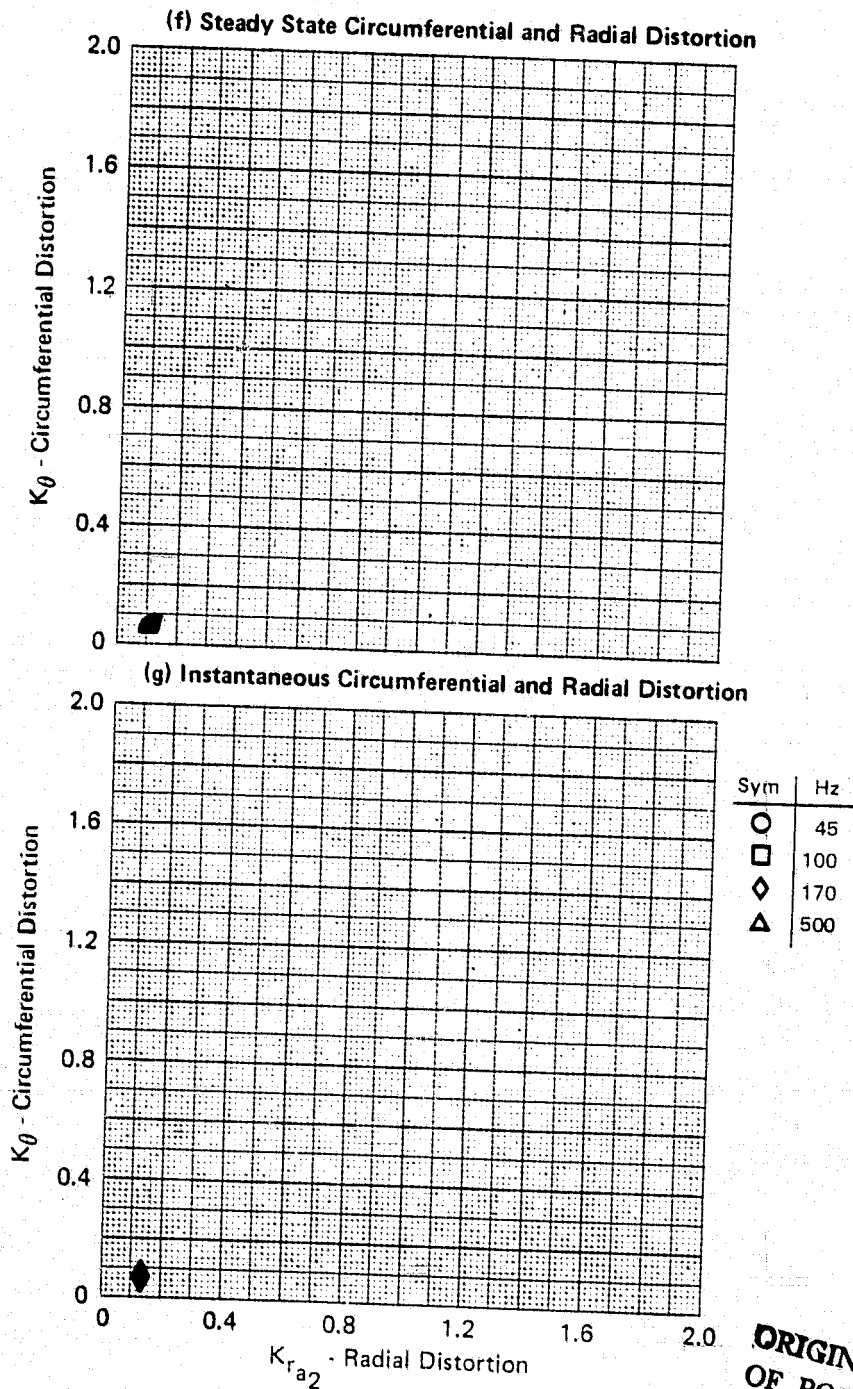


FIGURE G-11 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.67$, $\alpha = 4.3$, $\beta = 0.7$, WAT2 = 94.4 %

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FLIGHT - NASA Data Study

Part/Point - 424/2, Ident 11

RHO DELTA3 BYPASS CIVV
6.9 11.1 0.0 -16.053

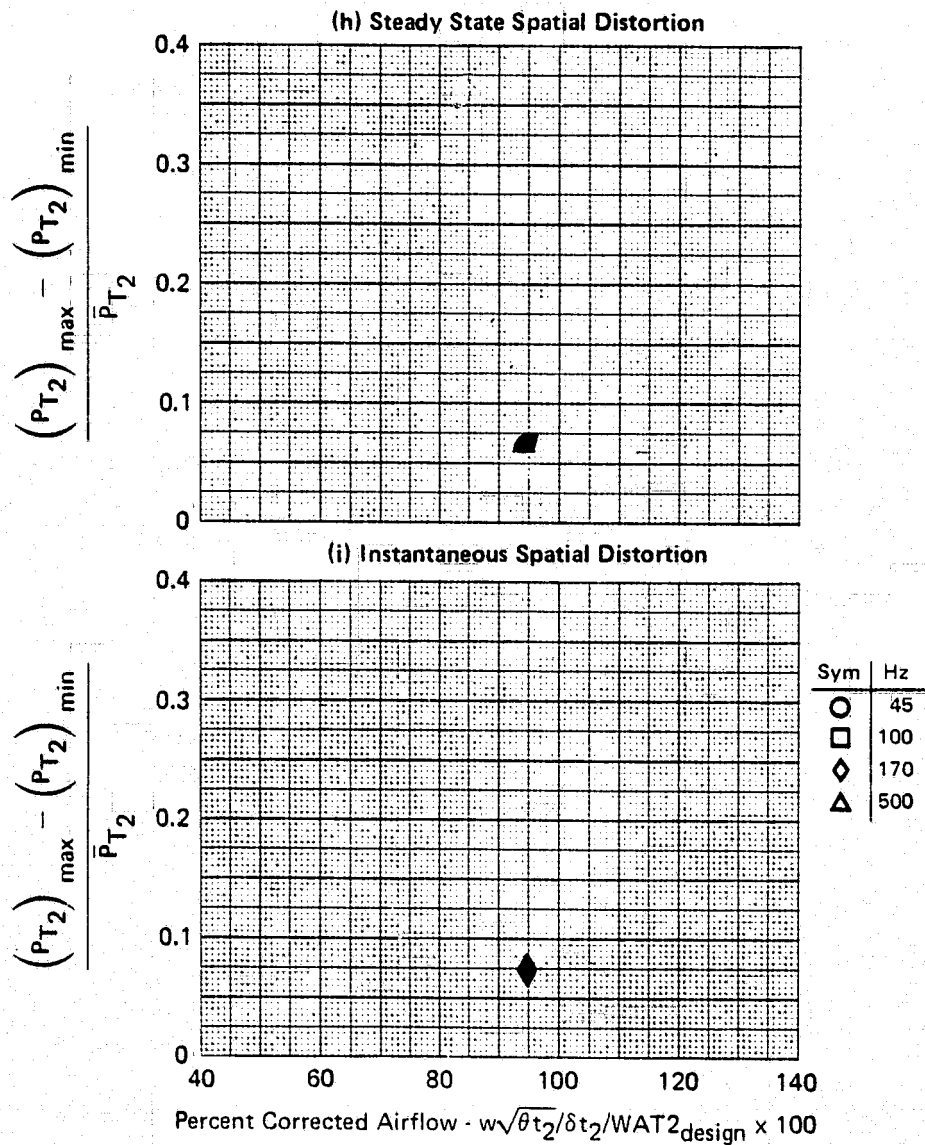


FIGURE G-11 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.67$, $\alpha = 4.3$, $\beta = 0.7$, $WAT2 = 94.4\%$

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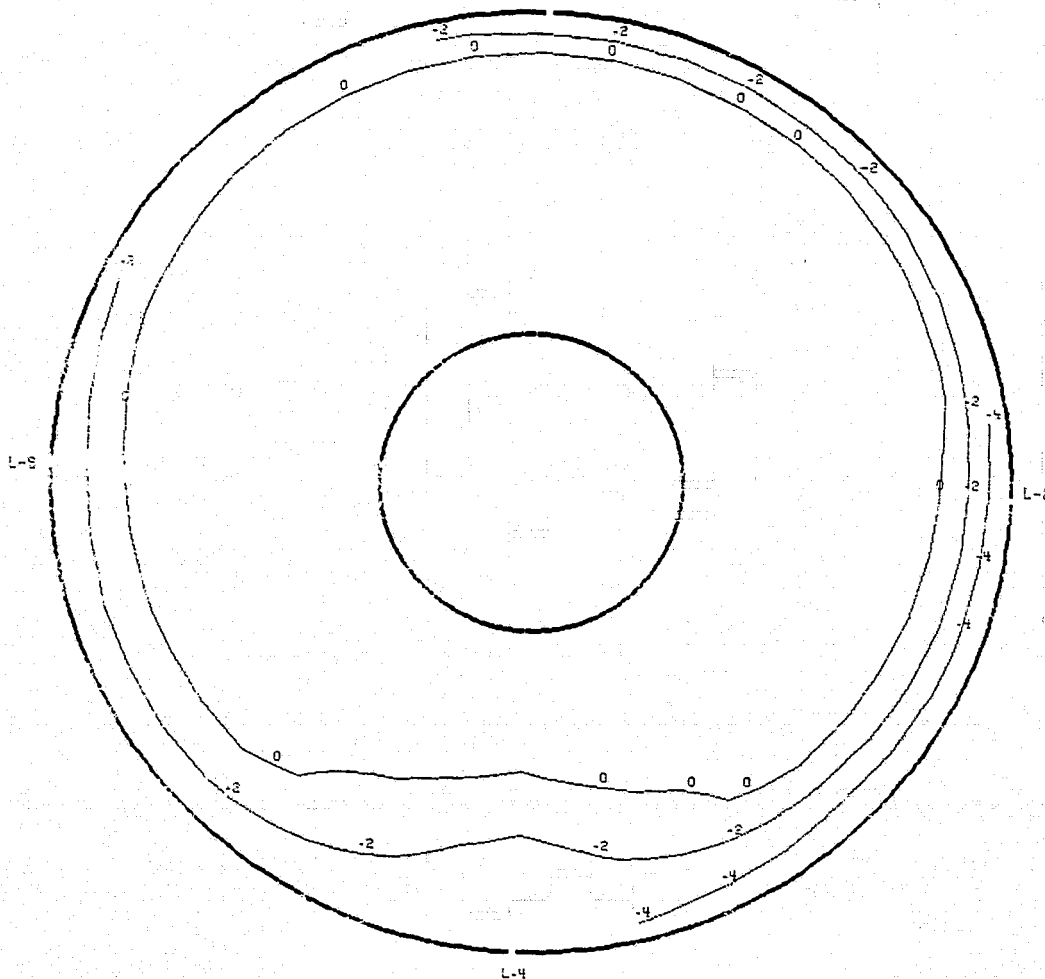
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/2 IDENT. 11
THE SEGMENT START TIME WAS AT 04:03:46.373

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.67	4.3	0.7	2417(7930)	6.9	11.1	0.0	94.4%	-16.053
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
101.0(14.643)	1.0	.0596	.1184	.2251	.2845	.0298	—	.0653

11 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 101.0 kPa (14.643 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

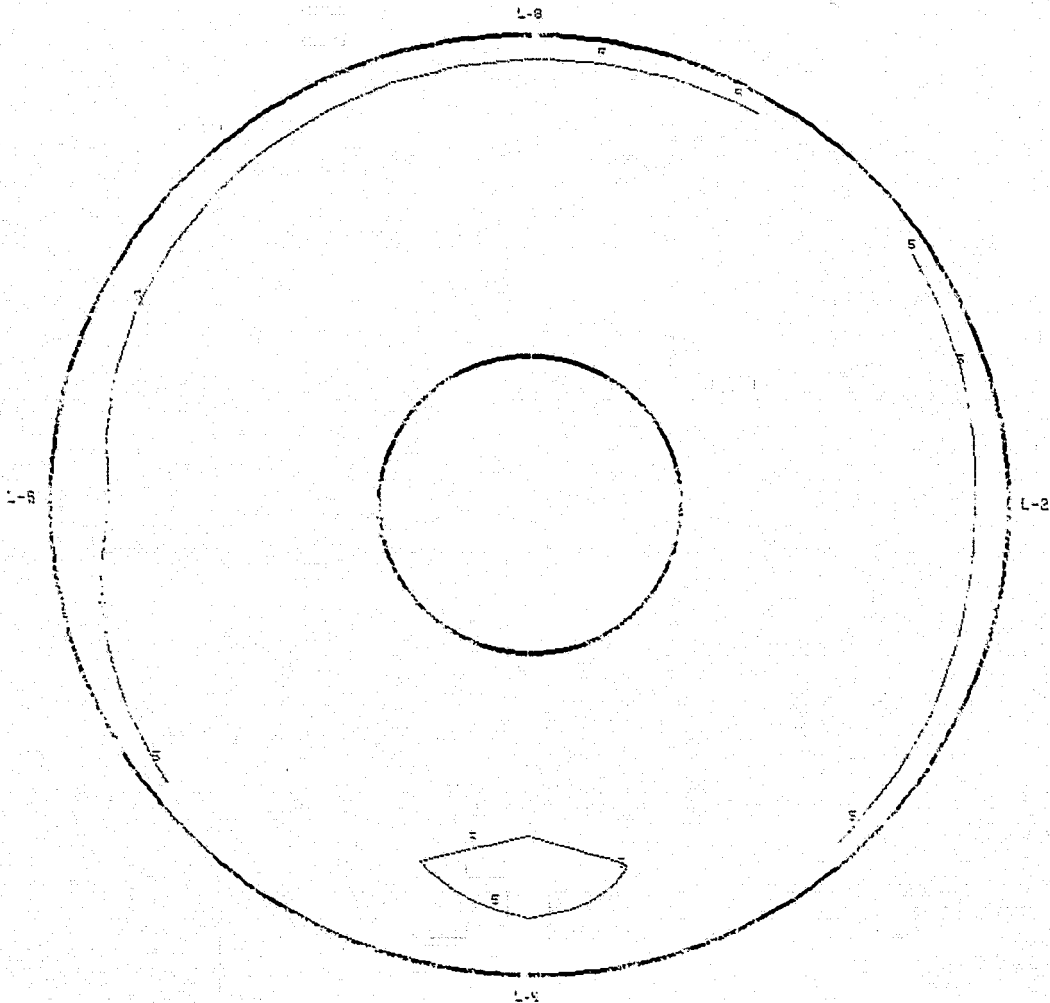
FIGURE G-11 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .67$, $\alpha = 4.3$, $\beta = 0.7$, $WAT2 = 94.4$ %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/2 IDENT. 11
THE SEGMENT START TIME WAS AT 04:03:46.373

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.67	4.3	0.7	2417(7930)	6.9	11.1	0.0	94.4%	-16.053

11(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0022

FIGURE G-11 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .67$, $\alpha = 4.3$, $\beta = 0.7$, $WAT2 = 94.4\%$

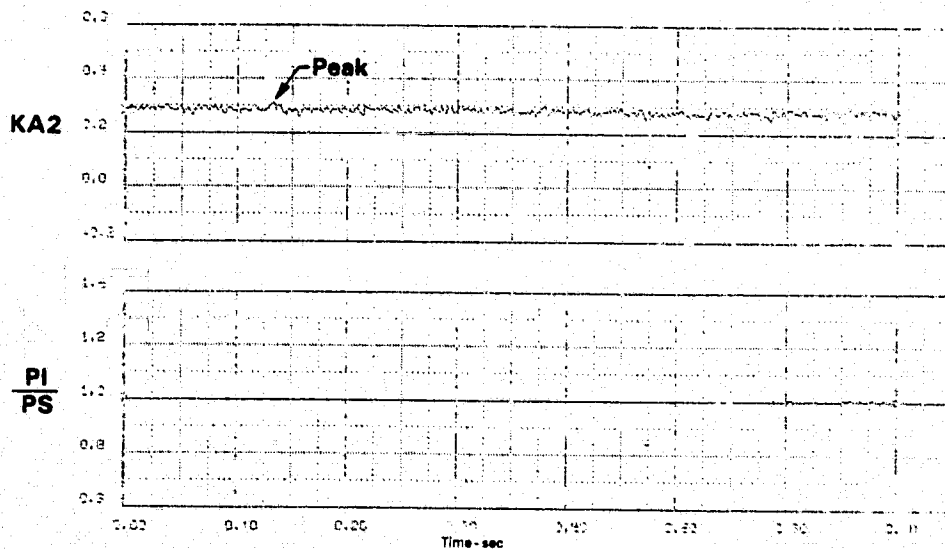
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/2 IDENT. 11
THE SEGMENT START TIME WAS AT 04:03:46.373

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.67	4.3	0.7	2419(7935)	6.9	11.1	0.0	94.4%	-16.053
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
101.1(14.66)	1.001	.0732	.1257	.2390	.3122	.0415	.0336	.0755

11(I) Time History Plots 170 Hz



PEAK AT TIME = 0.13221 SECONDS

FIGURE G-11 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .67$, $\alpha = 4.3$, $\beta = 0.7$, $WAT2 = 94.4\%$

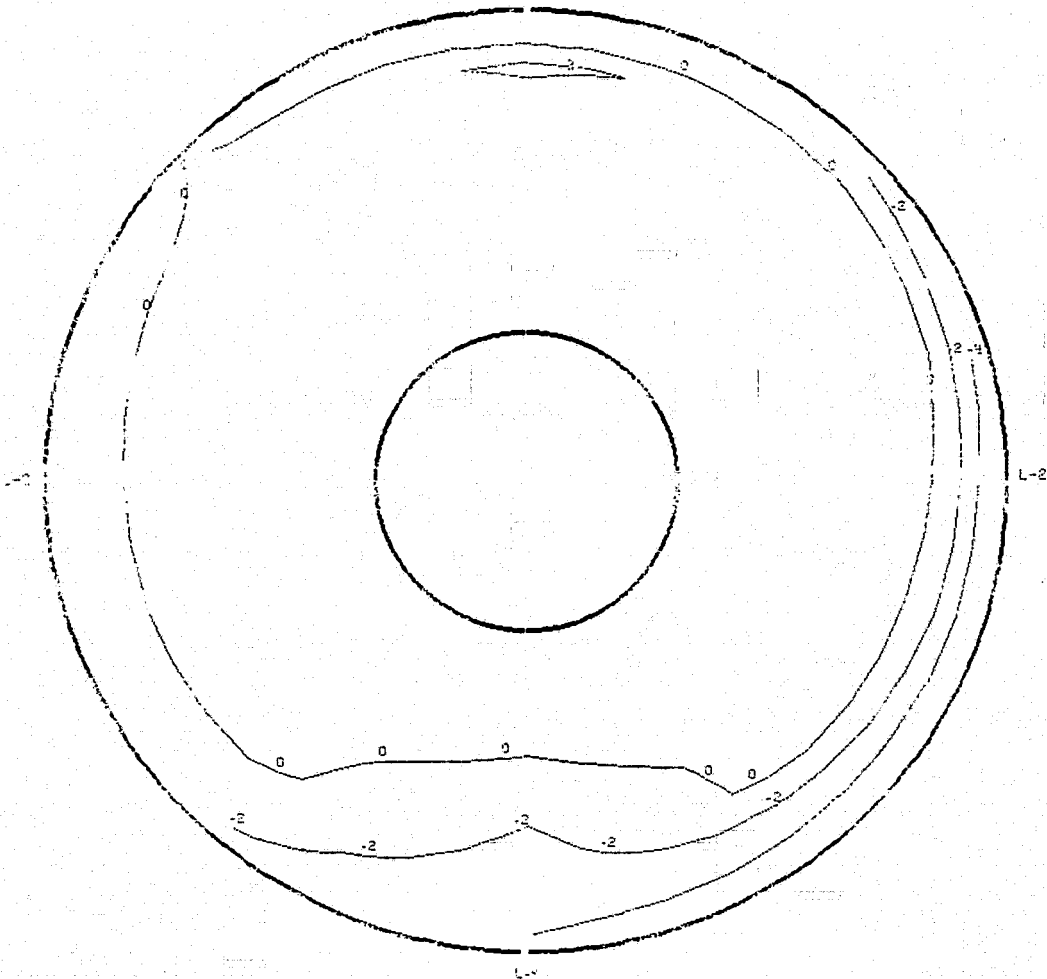
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/2 IDENT. 11
THE SEGMENT START TIME WAS AT 04:03:46.373

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.67	4.3	0.7	2419(7935)	6.9	11.1	0.0	94.4%	-16.063
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
101.1(14.66)	1.001	.0732	.1257	.2390	.3122	.0415	.0336	.0755

11(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 101.1 kPa (14.660 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.13221 SECONDS

FIGURE G-11 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .67$, $\alpha = 4.3$, $\beta = 0.7$, $WAT2 = 94.4\%$

FLIGHT - NASA Data Study
 Part/Point - 425/6, Ident 12
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -25.00

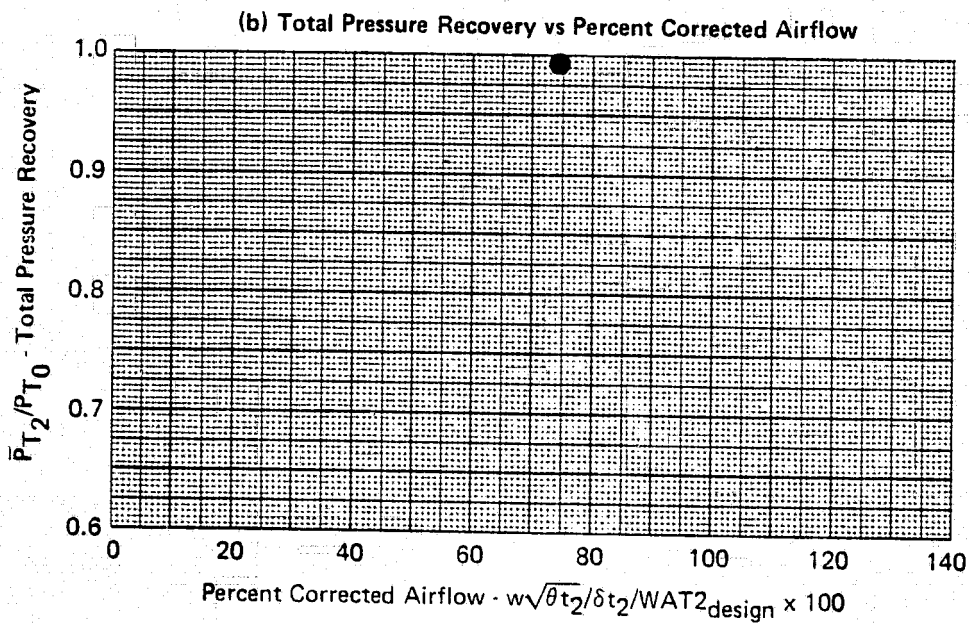
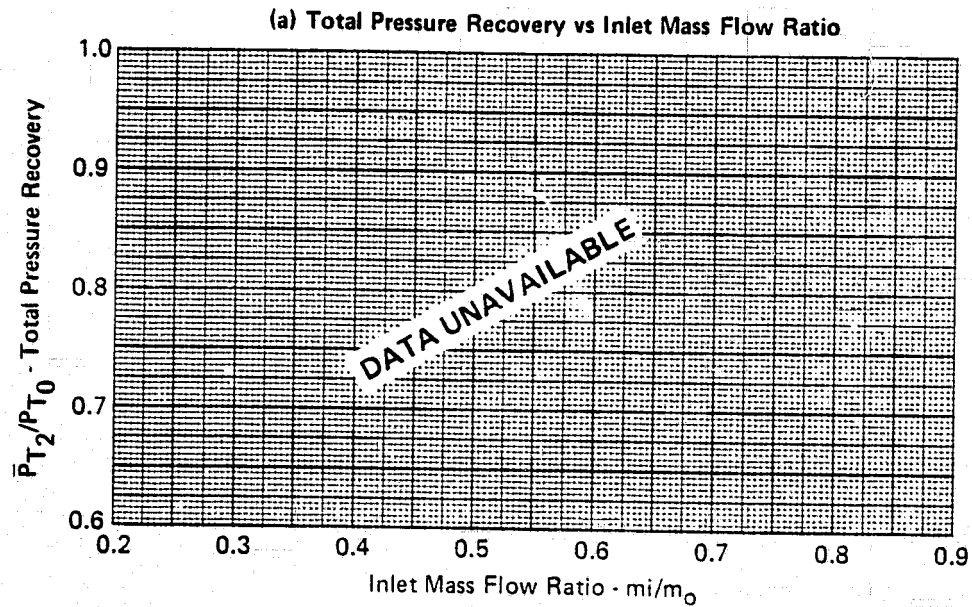
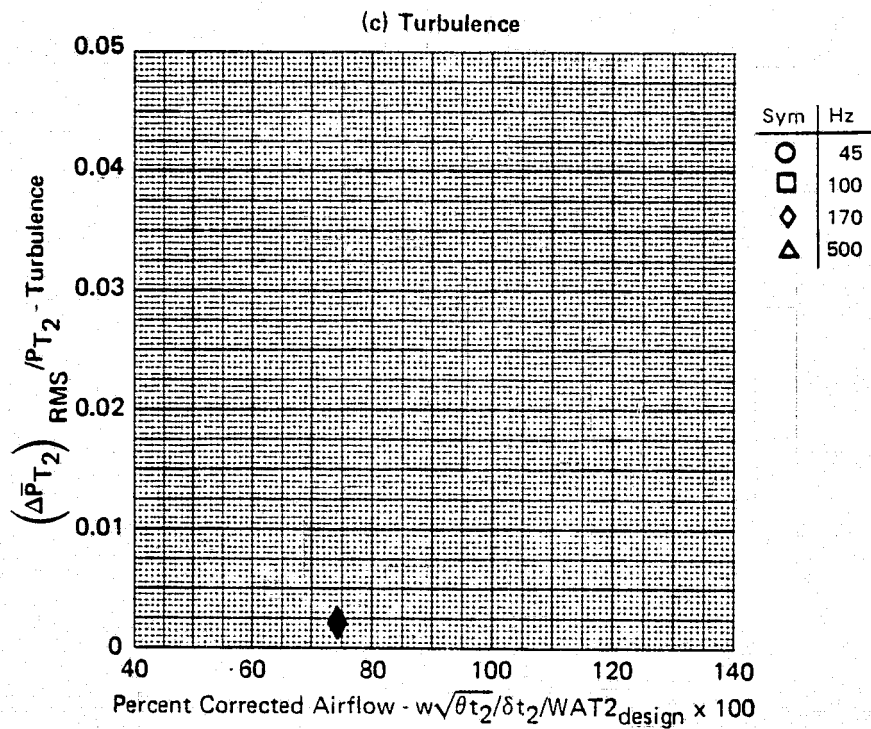


FIGURE G-12
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69$, $\alpha = 3.4$, $\beta = 0.7$, $WAT2 = 74.1\%$

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FLIGHT - NASA Data Study
 Part/Point - 425/6, Ident 12
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -25.00



GP77-0658-5

FIGURE G-12 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.69, \alpha = 3.4, \beta = 0.7, WAT2 = 74.1 \%$

FLIGHT - NASA Data Study
 Part/Point - 425/6, Ident 12
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -25.00

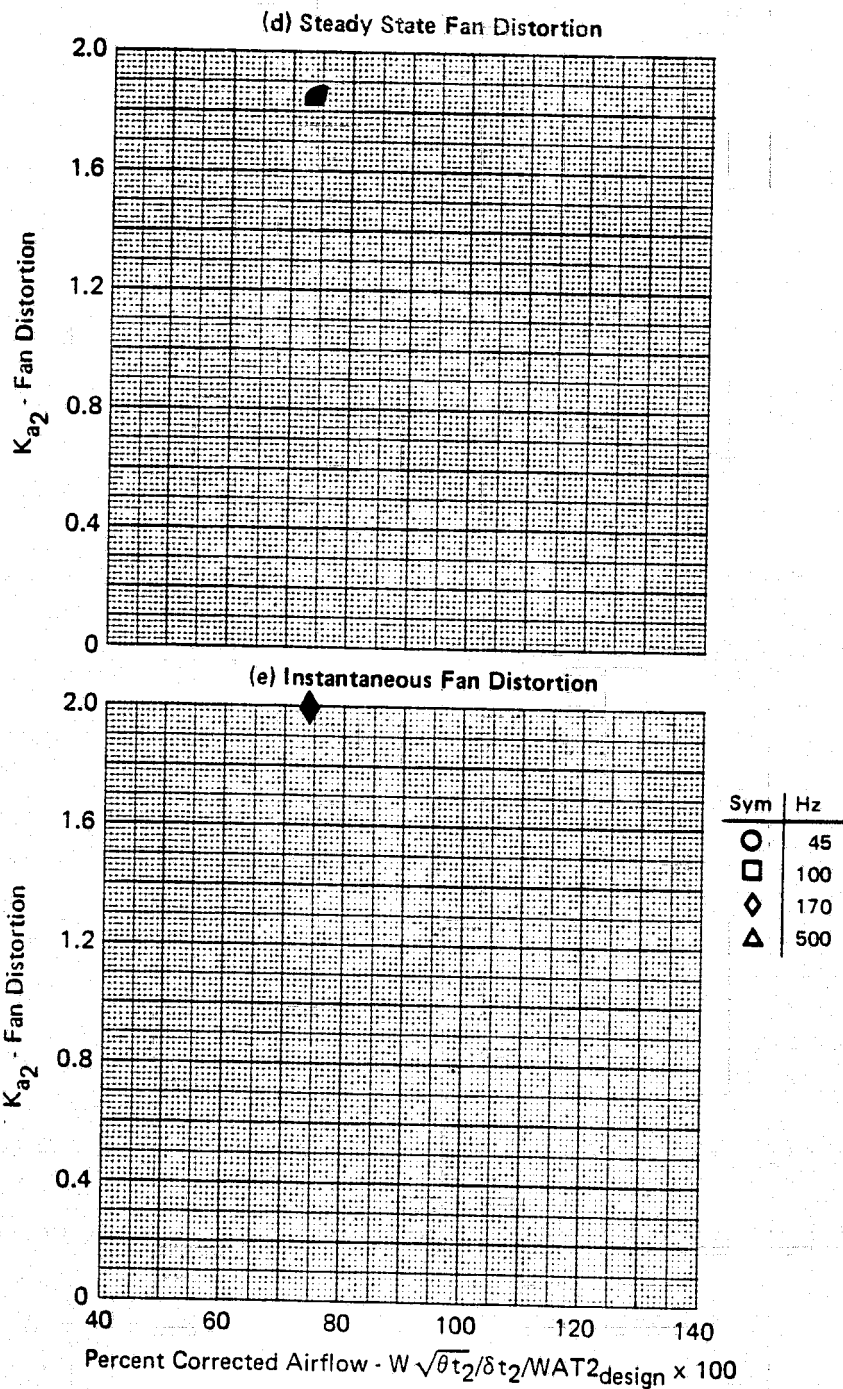


FIGURE G-12 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69, \alpha = 3.4, \beta = 0.7, WAT2 = 74.1 \%$

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FLIGHT - NASA Data Study

Part/Point - 425/6, Ident 12

RHO DELTA3 BYPASS CIVV
6.9 11.1 0.0 -25.00

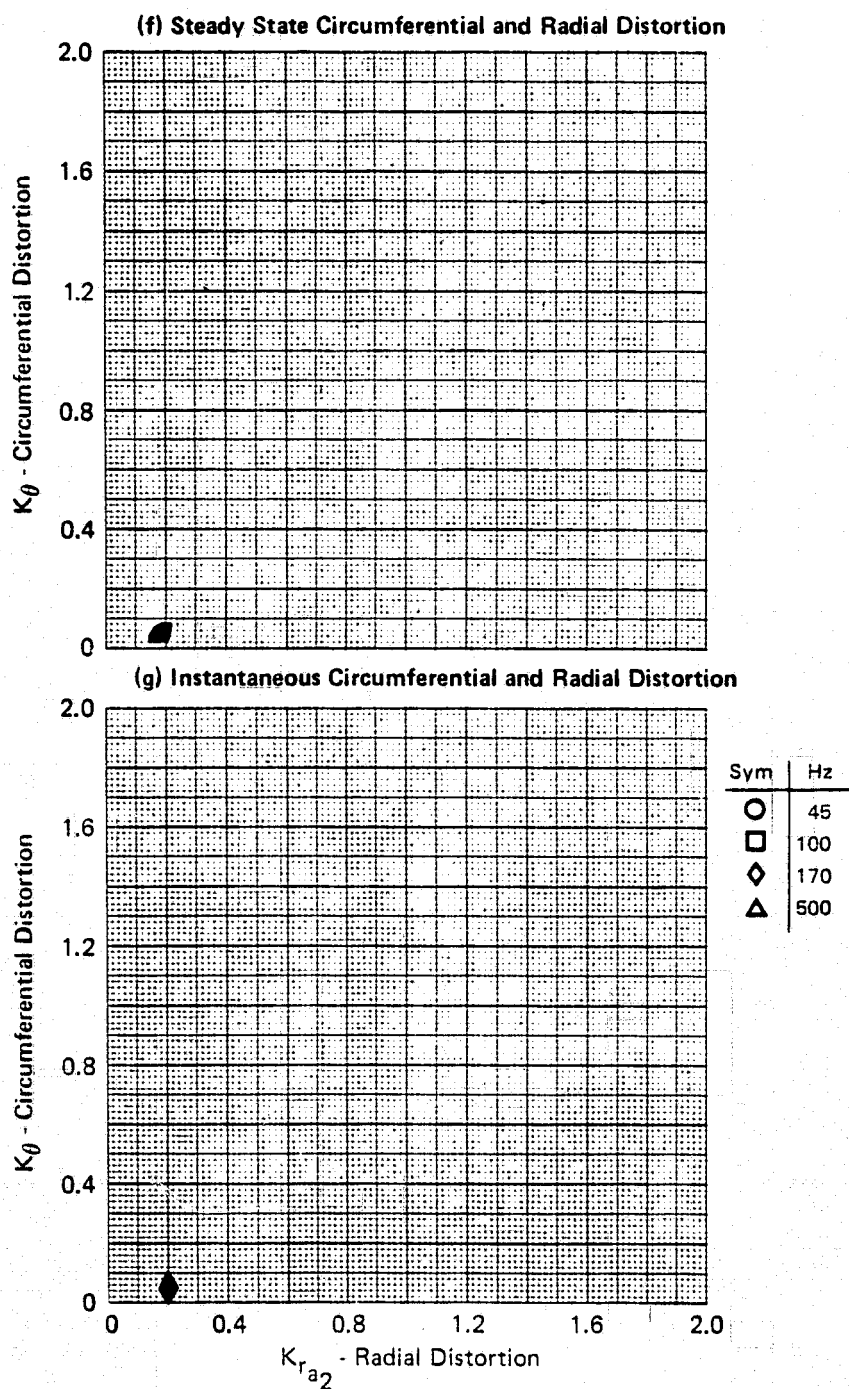
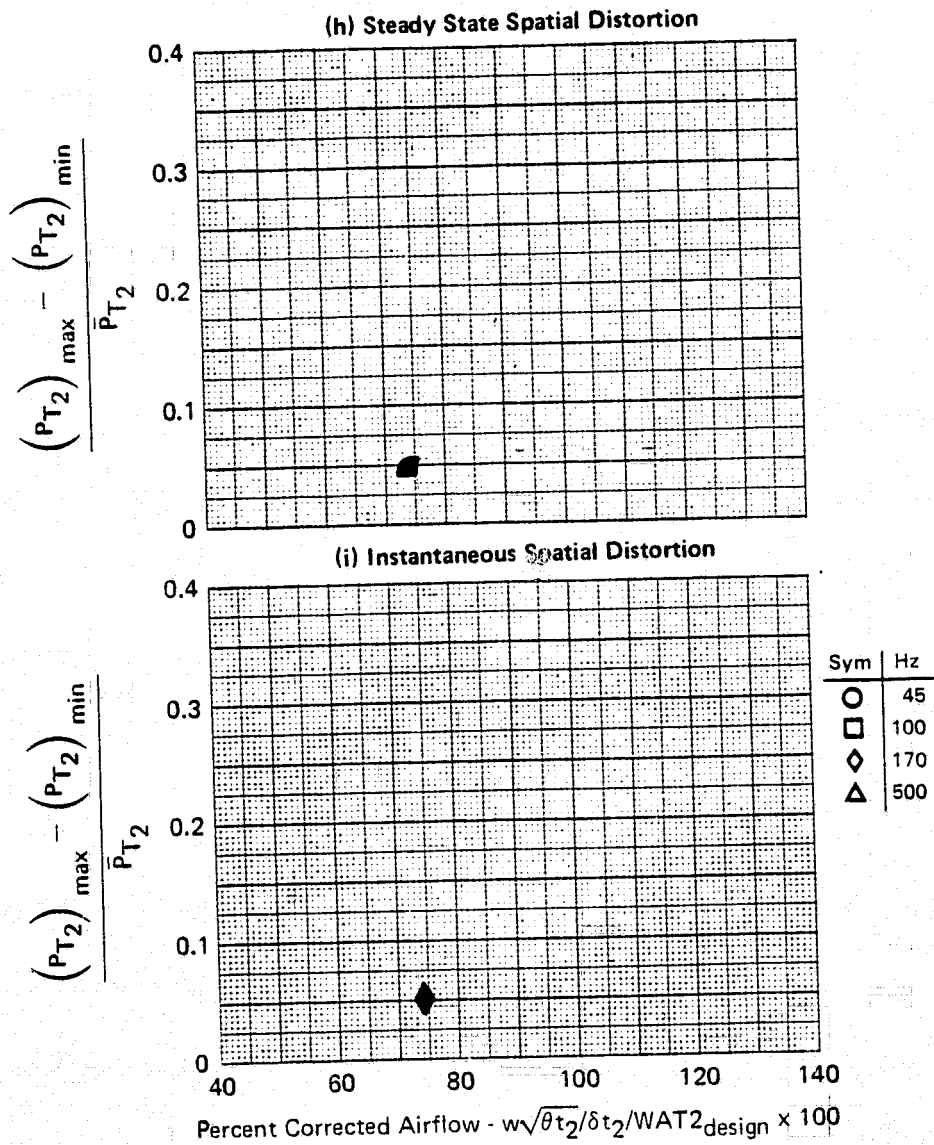


FIGURE G-12 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69$, $\alpha = 3.4$, $\beta = 0.7$, WAT2 = 74.1 %

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FLIGHT - NASA Data Study
 Part/Point - 425/6, Ident 12
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -25.00



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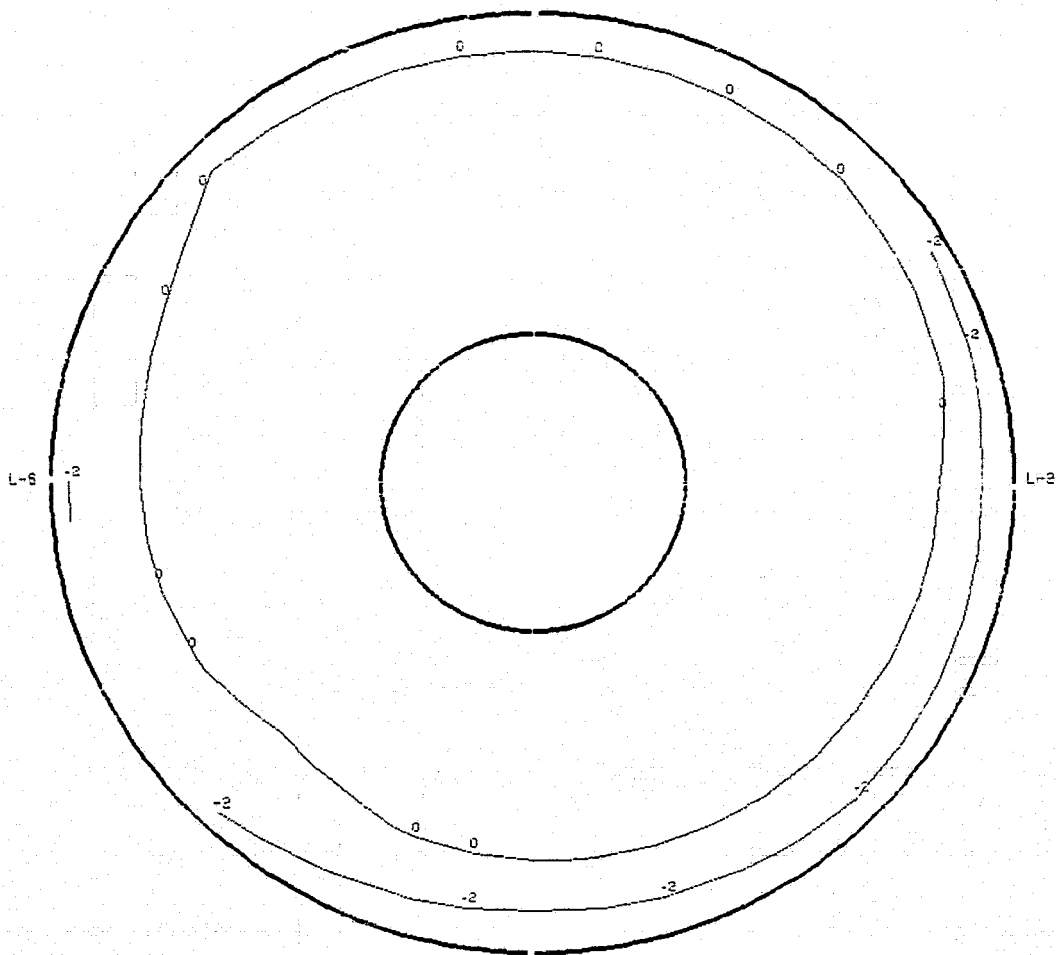
FIGURE G-12 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.69$, $\alpha = 3.4$, $\beta = 0.7$, $WAT2 = 74.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/6 IDENT.12
THE SEGMENT START TIME WAS AT 05:17:55.628

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.69	3.4	0.7	2395(7858)	6.9	11.1	0.0	74.1%	-25.00
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	KOSP	D2
103.5(15.008)	1.0	.0495	.1865	1.832	1.8470	.0126	—	.04747

12 (J) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 103.5 kPa (15.008 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

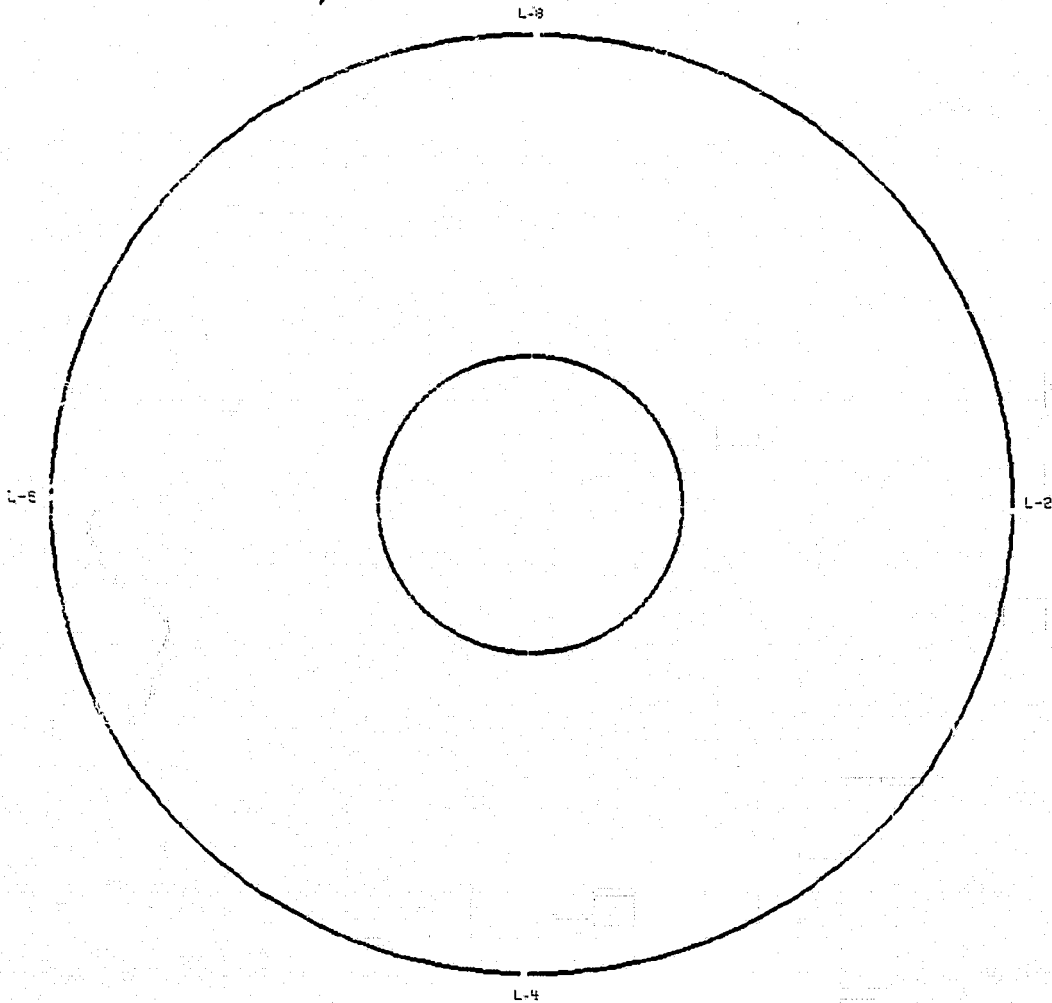
FIGURE G-12 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .69$, $\alpha = 3.4$, $\beta = 0.7$, $WAT2 = 74.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/6 IDENT.12
THE SEGMENT START TIME WAS AT 05:17:55.628

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.69	3.4	0.7	2395(7858)	6.9	11.1	0.0	74.1%	-25.00

12(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0022

FIGURE G-12 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .69$, $\alpha = 3.4$, $\beta = 0.7$, $WAT2 = 74.1\%$

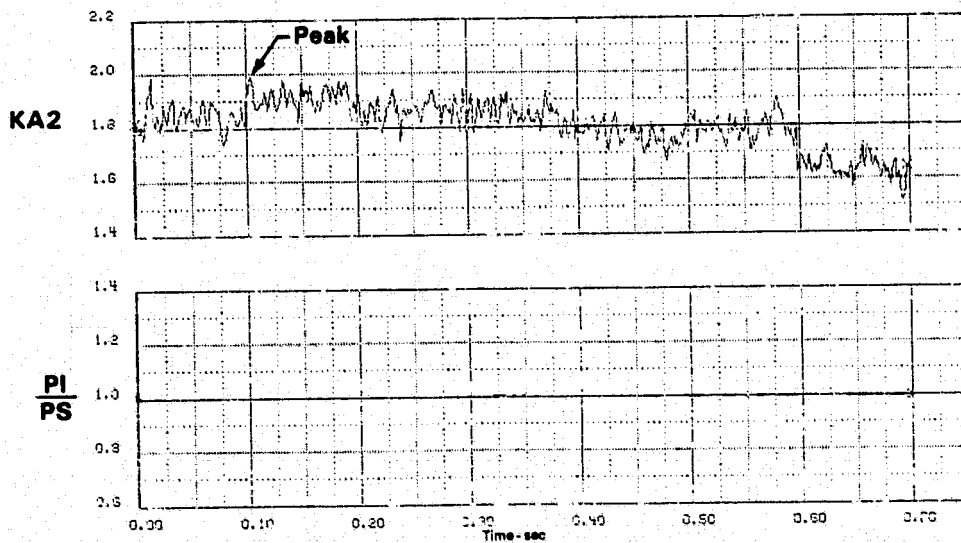
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/6 IDENT.12
THE SEGMENT START TIME WAS AT 08:17:55.828

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.69	3.4	0.7	2391(7846)	6.9	11.1	0.0	74.1%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
103.4(14.980)	.9888	.0473	.1979	1.9444	1.9919	.0213	.0182	.0534

12(I) Time History Plots
170 Hz



PEAK AT TIME = 0.10343 SECONDS

FIGURE G-12 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .69$, $\alpha = 3.4$, $\beta = 0.7$, $WAT2 = 74.1\%$

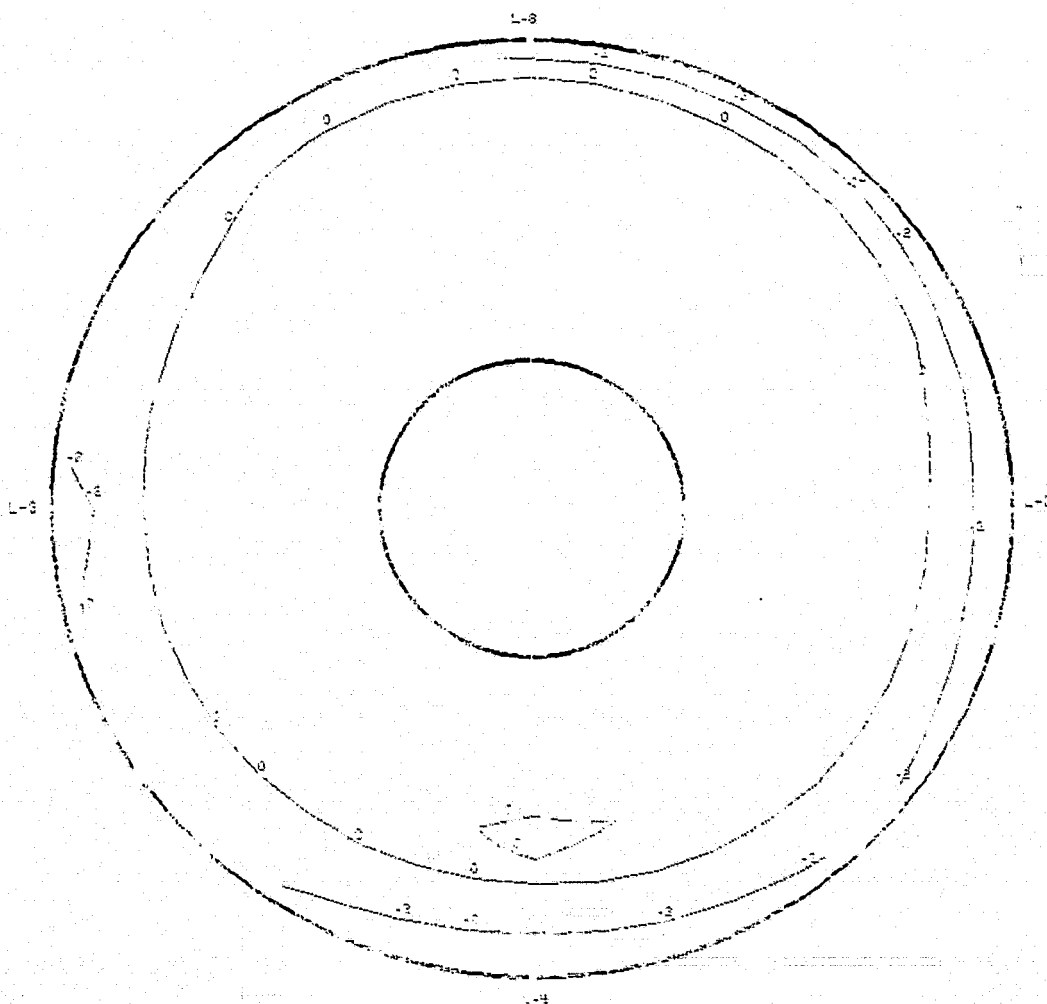
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/6 IDENT.12
THE SEGMENT START TIME WAS AT 05:17:55.628

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.69	3.4	0.7	2391(7846)	6.9	11.1	0.0	74.1%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
103.4(14.990)	.9988	.0473	.1979	1.9444	1.9919	.0213	.0162	.0534

12(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz

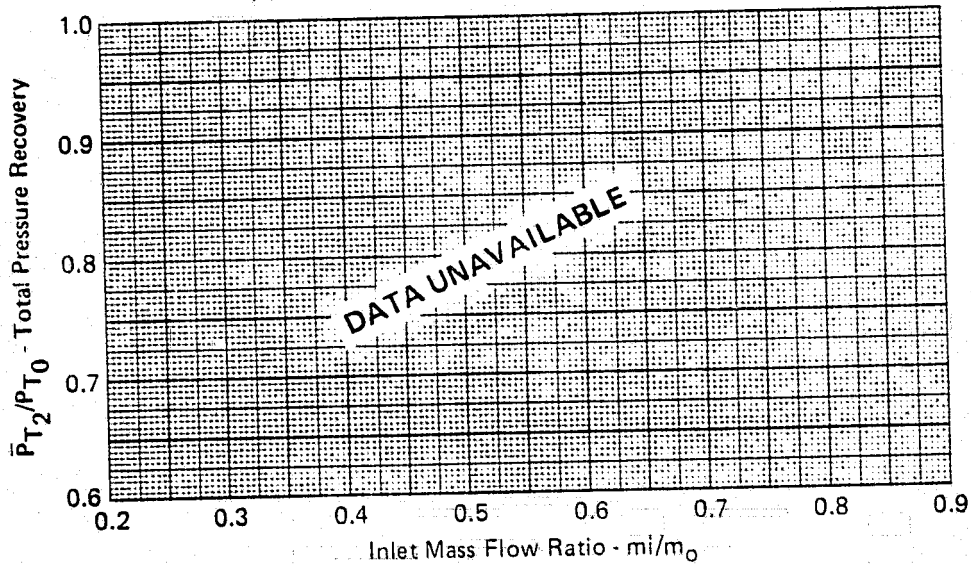


MEAN FACE PRESSURE = 103.4 kPa (0.10343 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.10343 SECONDS

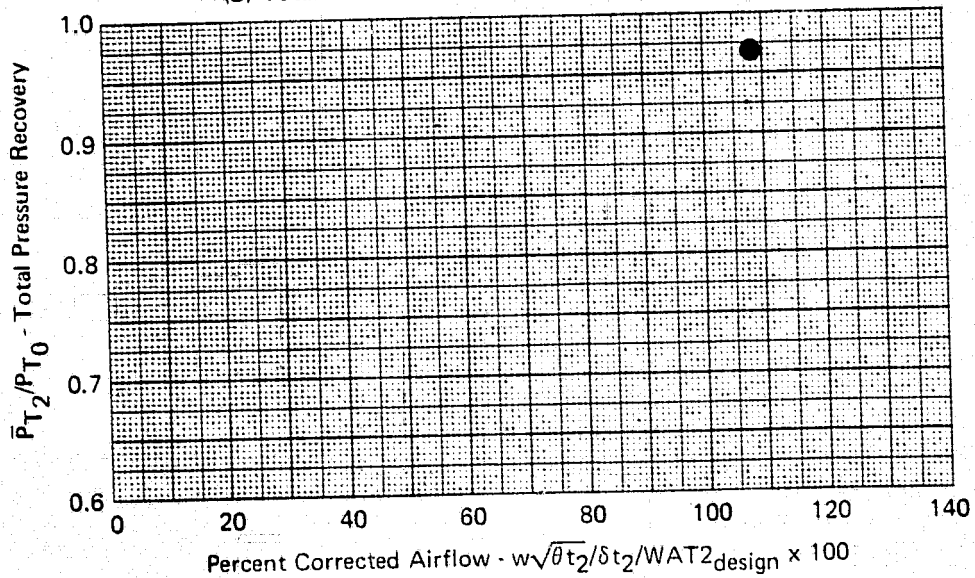
FIGURE G-12 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .69$, $\alpha = 3.4$, $\beta = 0.7$, WAT2 = 74.1 %

FLIGHT NASA Data Study
 Part/Point - 412/2, Ident 13
 RHO DELTA3 BYPASS CIVV
 7.0 11.1 0.0 -5.00

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



(b) Total Pressure Recovery vs Percent Corrected Airflow

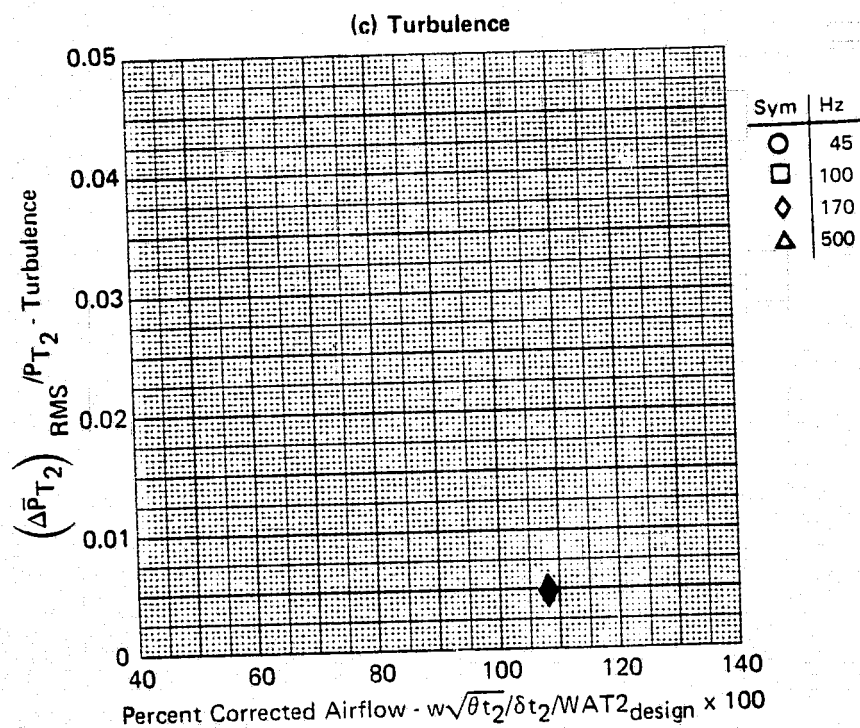


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FIGURE G-13
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.59, \alpha = 4.6, \beta = 1.2, WAT2 = 107.9\%$

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FLIGHT - NASA Data Study
 Part/Point - 412/2, Ident 13
 RHO DELTA3 BYPASS CIVV
 7.0 11.1 0.0 -5.00

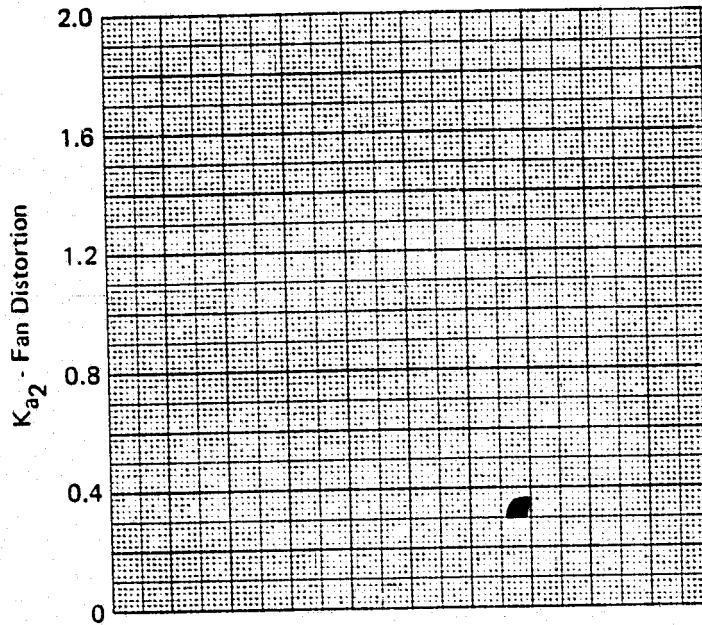


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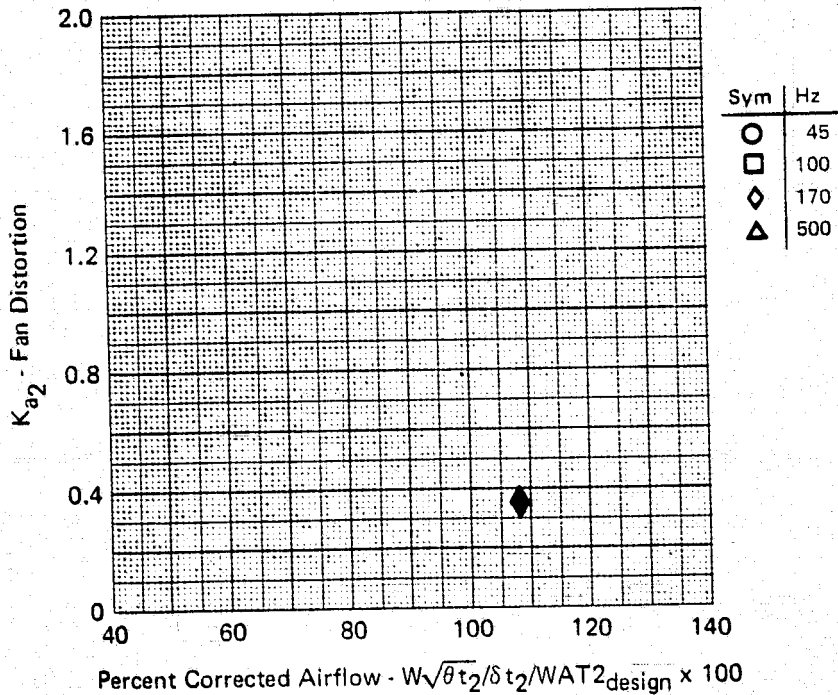
FIGURE G-13 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.59$, $\alpha = 4.6$, $\beta = 1.2$, $WAT2 = 107.9\%$

FLIGHT - NASA Data Study
 Part/Point - 412/2, Ident 13
 RHO DELTA3 BYPASS CIVV
 7.0 11.1 0.0 -5.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion



GP77 0658-3

FIGURE G-13 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.59$, $\alpha = 4.6$, $\beta = 1.2$, $WAT2 = 107.9\%$

FLIGHT - NASA Data Study
 Part/Point - 412/2, Ident 13
 RHO DELTA3 BYPASS CIVV
 7.0 11.1 0.0 -5.00

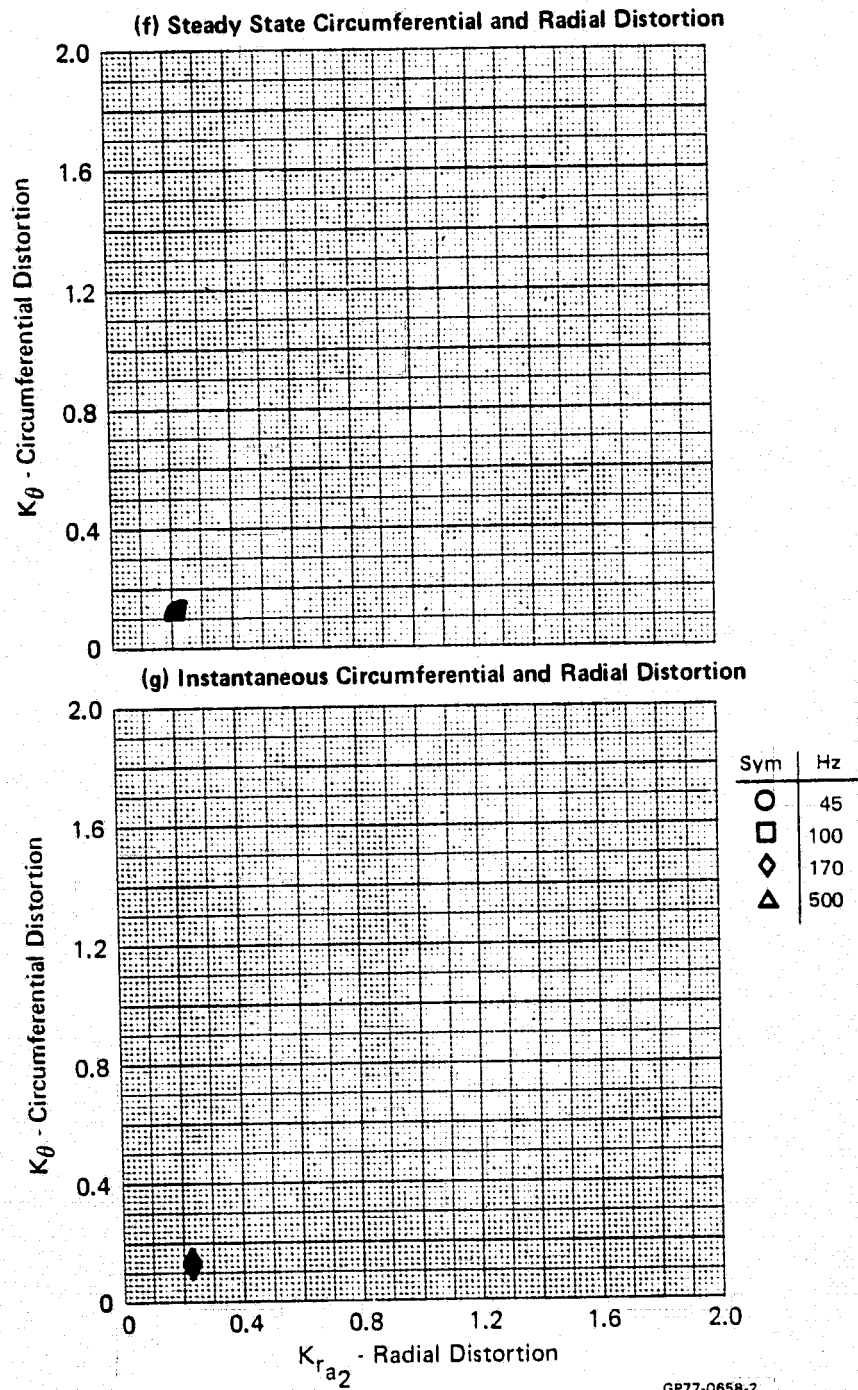
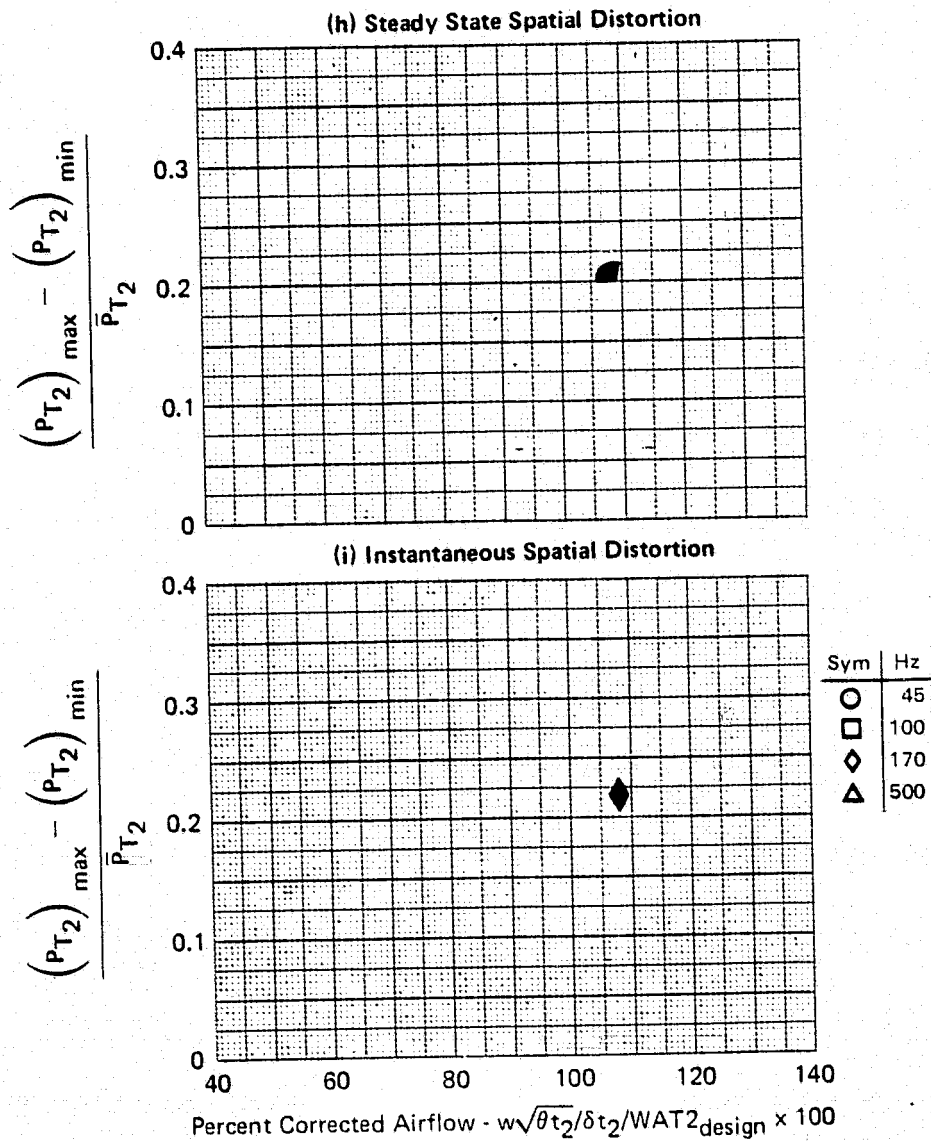


FIGURE G-13 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.59$, $\alpha = 4.6$, $\beta = 1.2$, $WAT2 = 107.9\%$

FLIGHT - NASA Data Study
 Part/Point - 412/2, Ident 13
 RHO DELTA3 BYPASS CIVV
 7.0 11.1 0.0 -5.00



GP77-0658-4

FIGURE G-13 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.59$, $\alpha = 4.6$, $\beta = 1.2$, $WAT2 = 107.9\%$

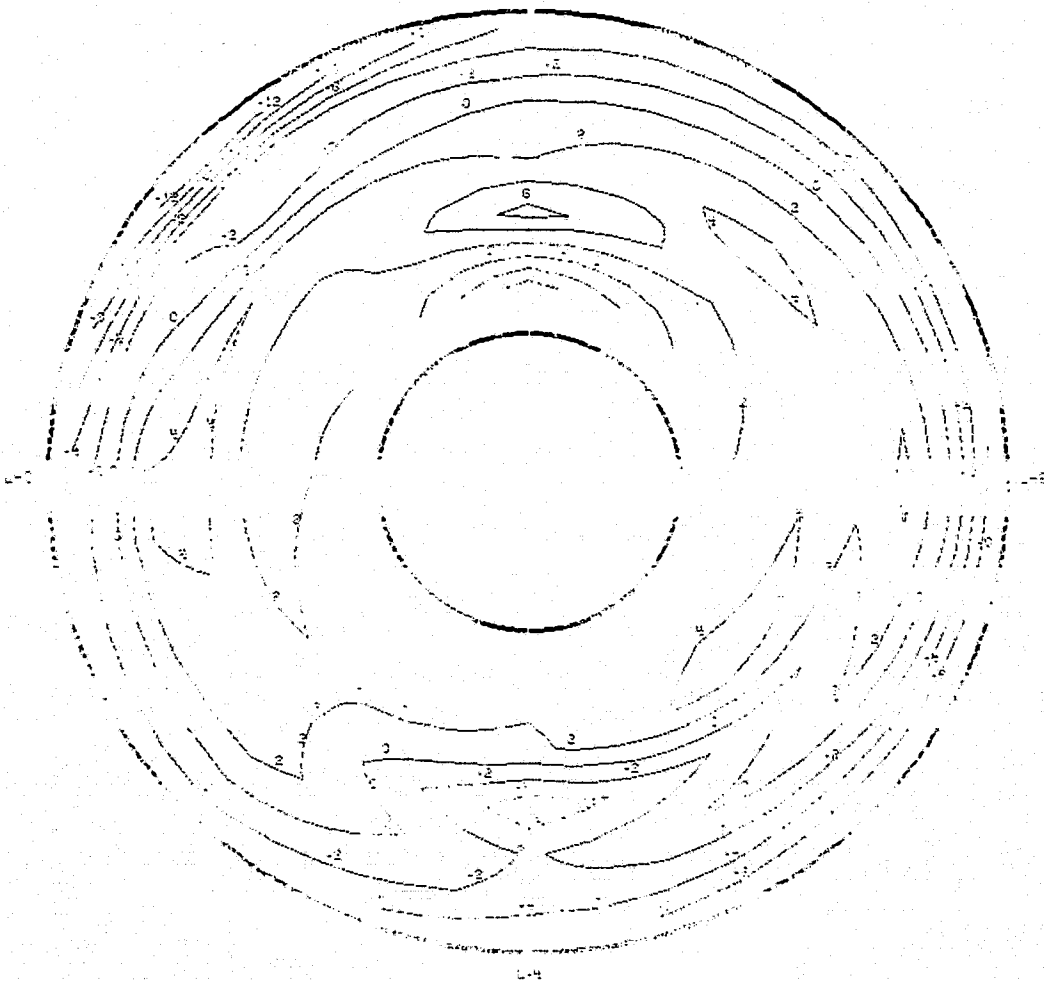
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 412/2 IDENT.13
THE SEGMENT START TIME WAS AT 12:06:59.334

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.59	4.6	1.2	8987(29387)	7.0	11.1	0.0	107.9%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
37.95(5.504)	1.0	.1184	.2158	.2009	.3193	.1676	—	.2066

13(j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 37.95 kPa (5.504 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

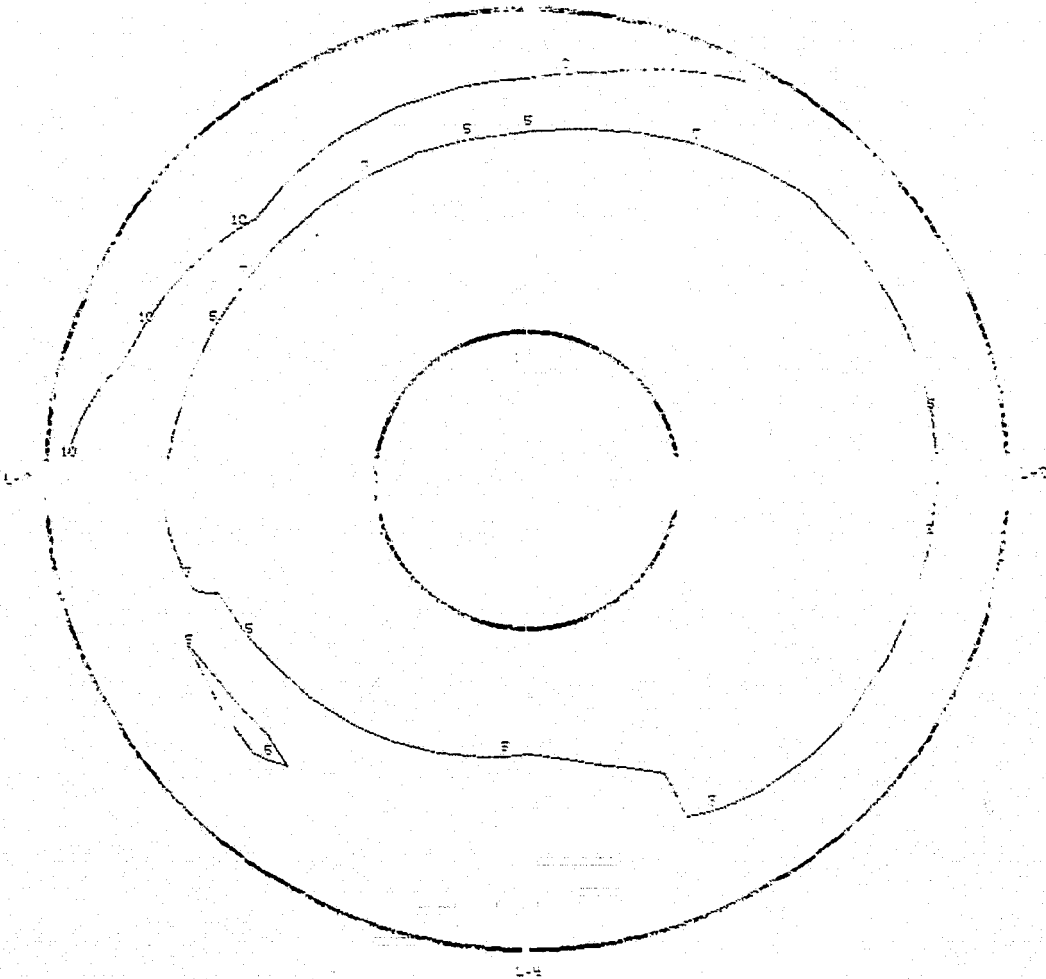
FIGURE G-13 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .59$, $\alpha = 4.6$, $\beta = 1.2$, $WAT2 = 107.9\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 412/2 IDENT.13
THE SEGMENT START TIME WAS AT 12:05:59.334

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.59	4.6	1.2	8957(29387)	7.0	11.1	0.0	107.9%	-5.000

13(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0049

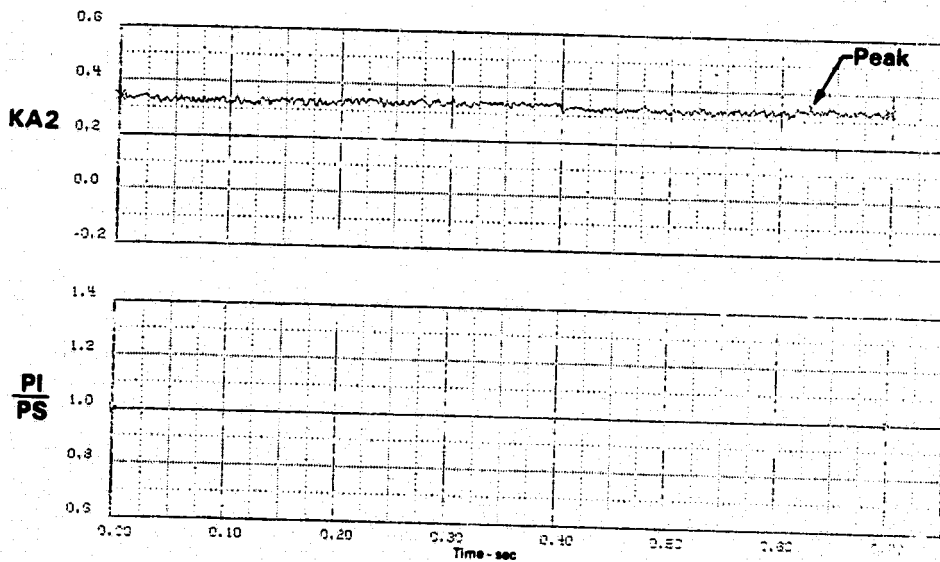
FIGURE G-13 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .59$, $\alpha = 4.6$, $\beta = 1.2$, $WAT2 = 107.9\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 412/2 IDENT.13
THE SEGMENT START TIME WAS AT 12:05:59.334

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.59	4.6	1.2	8987(29386)	7.0	11.1	0.0	107.9%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
37.99(5.510)	1.0011	.1430	.2256	.2100	.3530	.1986	.1747	.2196

13(I) Time History Plots
170 Hz



PEAK AT TIME = 0.62676 SECONDS

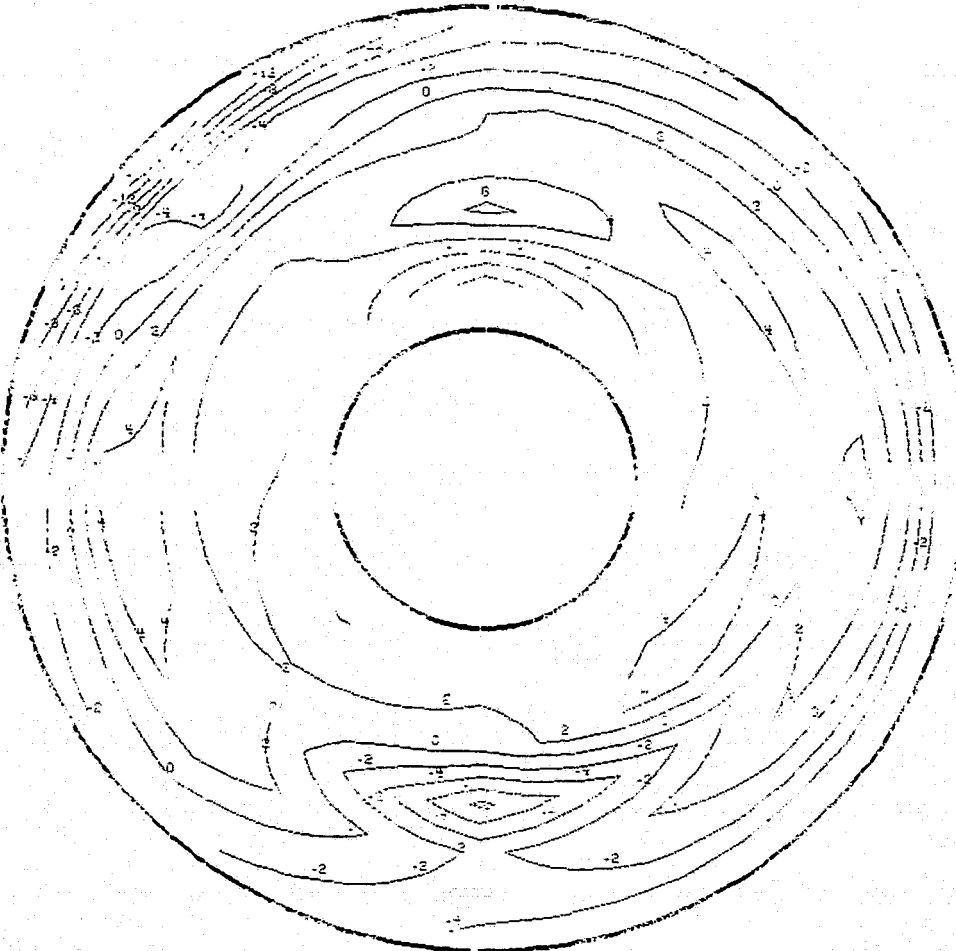
FIGURE G-13 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .59$, $\alpha = 4.6$, $\beta = 1.2$, $WAT2 = 107.9\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 412/2 IDENT.13
THE SEGMENT START TIME WAS AT 12:05:59.334

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.59	4.6	1.2	8957(29386)	7.0	11.1	0.0	107.9%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
37.99(5.510)	1.0011	.1430	.2256	.2100	.3530	.1986	.1747	.2196

13(m) Instantaneous Total Pressure Contour at Peak Instantaneous Ka_2
170 Hz



MEAN FACE PRESSURE = 37.99 kPa (5.510 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.62676 SECONDS

FIGURE G-13 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .59$, $\alpha = 4.6$, $\beta = 1.2$, $WAT2 = 107.9\%$

FLIGHT - NASA Data Study
 Part/Point - 424/11 Ident 14
 RHO DELTA3 BYPASS CIVV
 6.9 11.0 0.0 -25.00

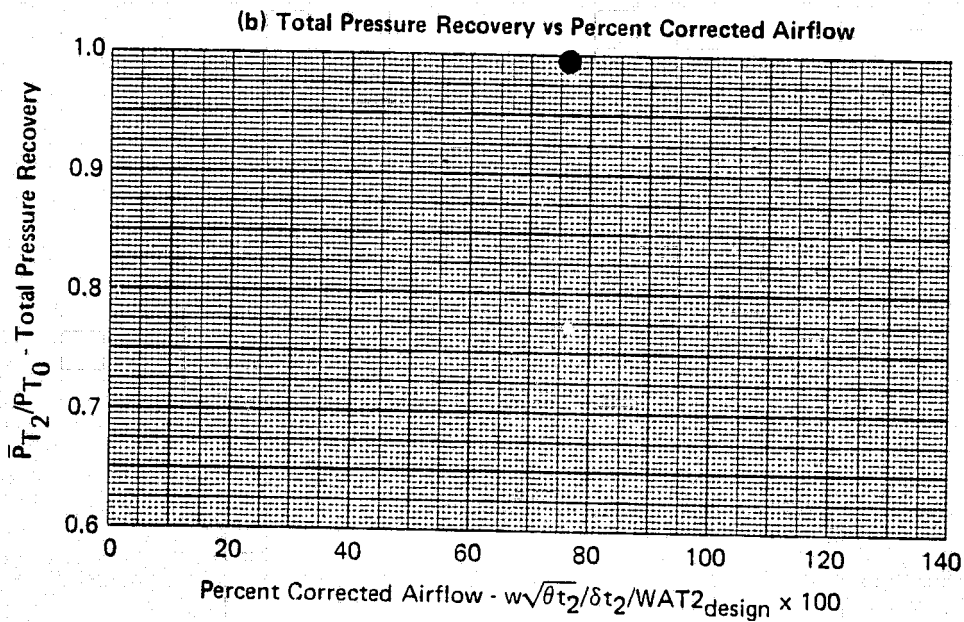
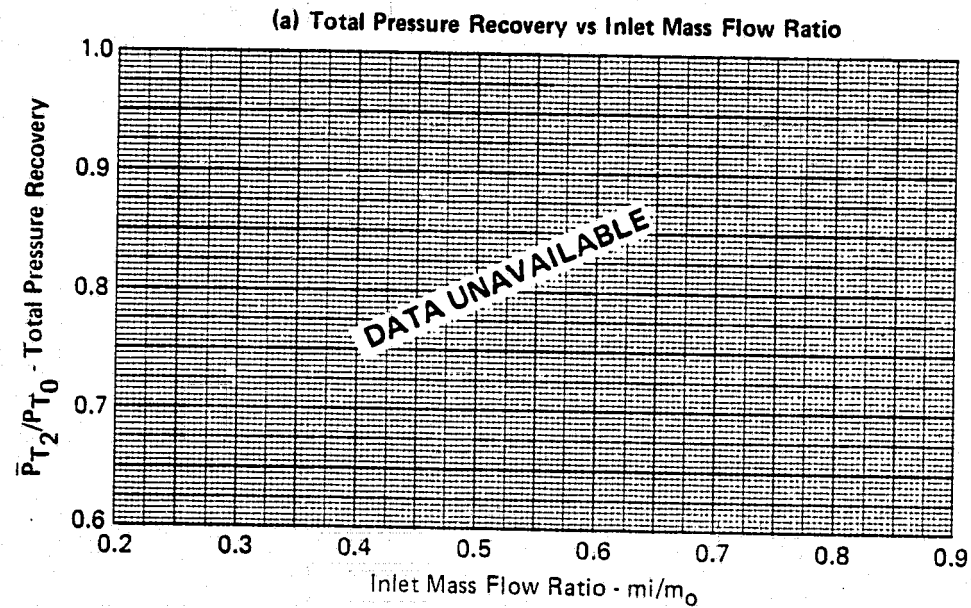
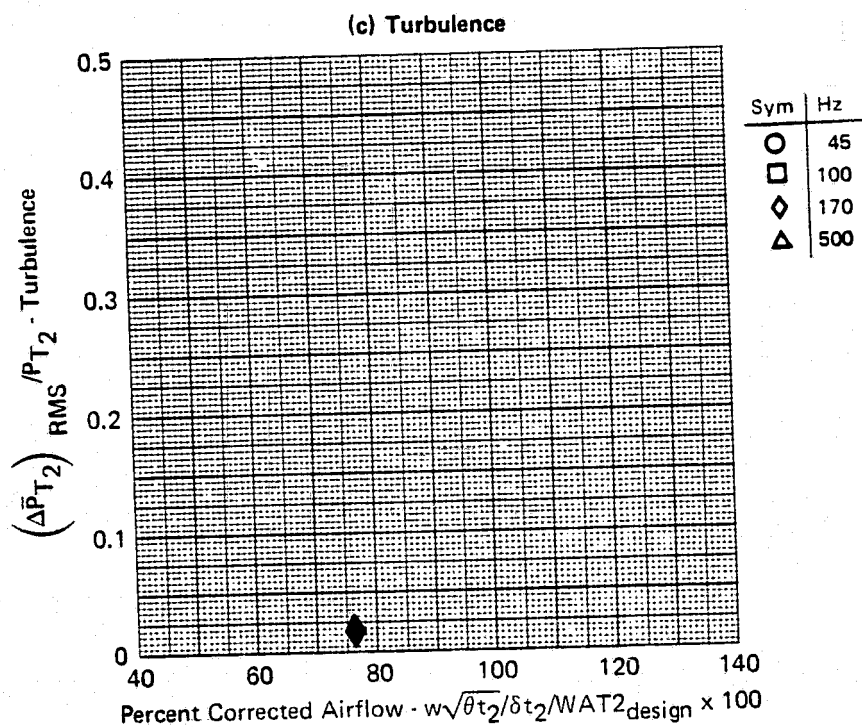


FIGURE G-14
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .60$, $\alpha = 4.6$, $\beta = .6$, $WAT2 = 76.2\%$

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FLIGHT - NASA Data Study
 Part/Point - 424/11 Ident 14
 RHO DELTA3 BYPASS CIVV
 6.9 11.0 0.0 -25.00

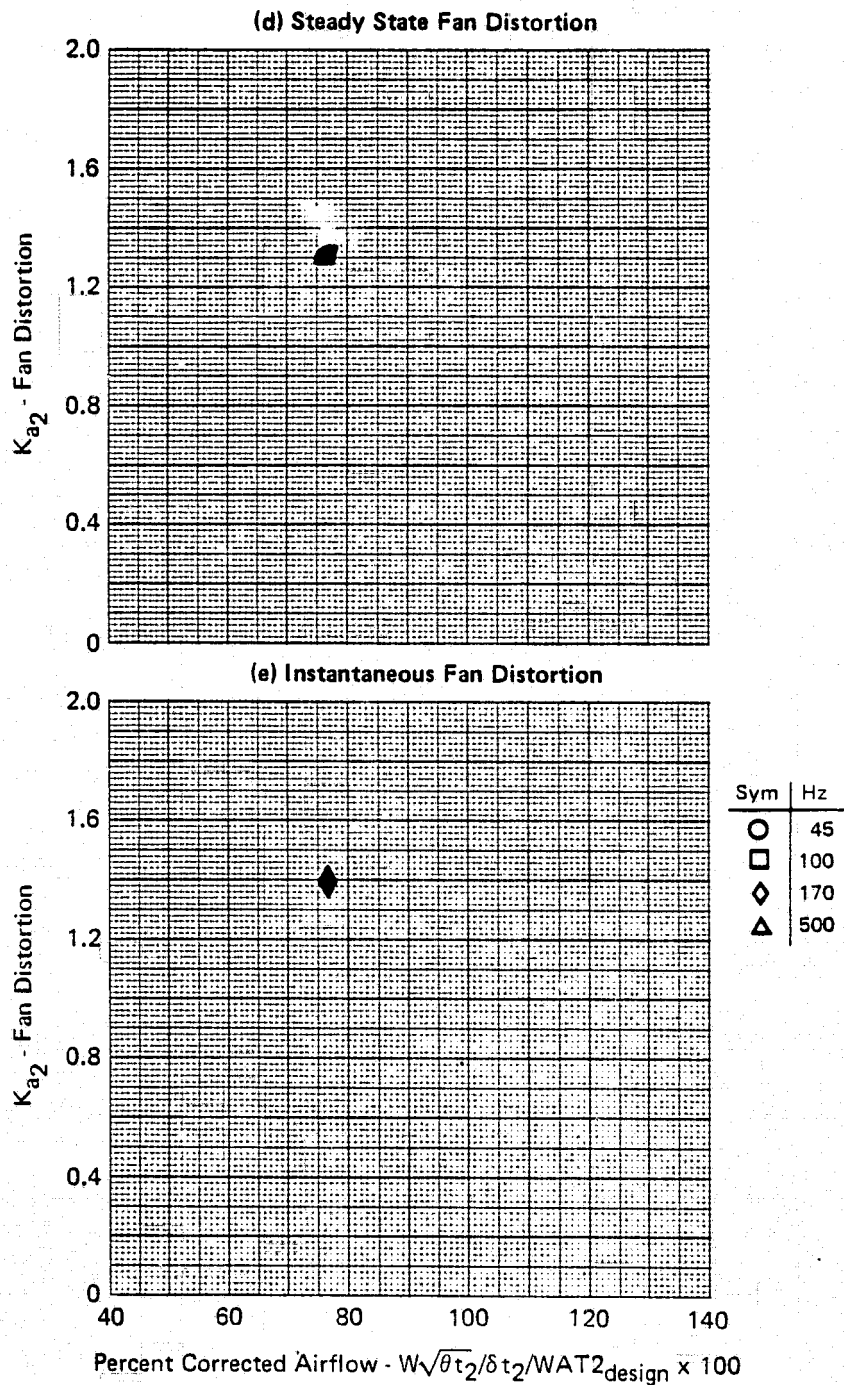


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FIGURE G-14 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .60$, $\alpha = 4.6$, $\beta = .6$, $WAT2 = 76.2\%$

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FLIGHT - NASA Data Study
 Part/Point - 424/11 Ident 14.
 RHO DELTA3 BYPASS CIVV
 6.9 11.0 0.0 -25.00



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FIGURE G-14 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .60$, $\alpha = 4.6$, $\beta = .6$, $WAT2 = 76.2\%$

FLIGHT - NASA Data Study
 Part/Point - 424/11 Ident 14.
 RHO 6.9 DELTA3 11.0 BYPASS 0.0 CIVV -25.00

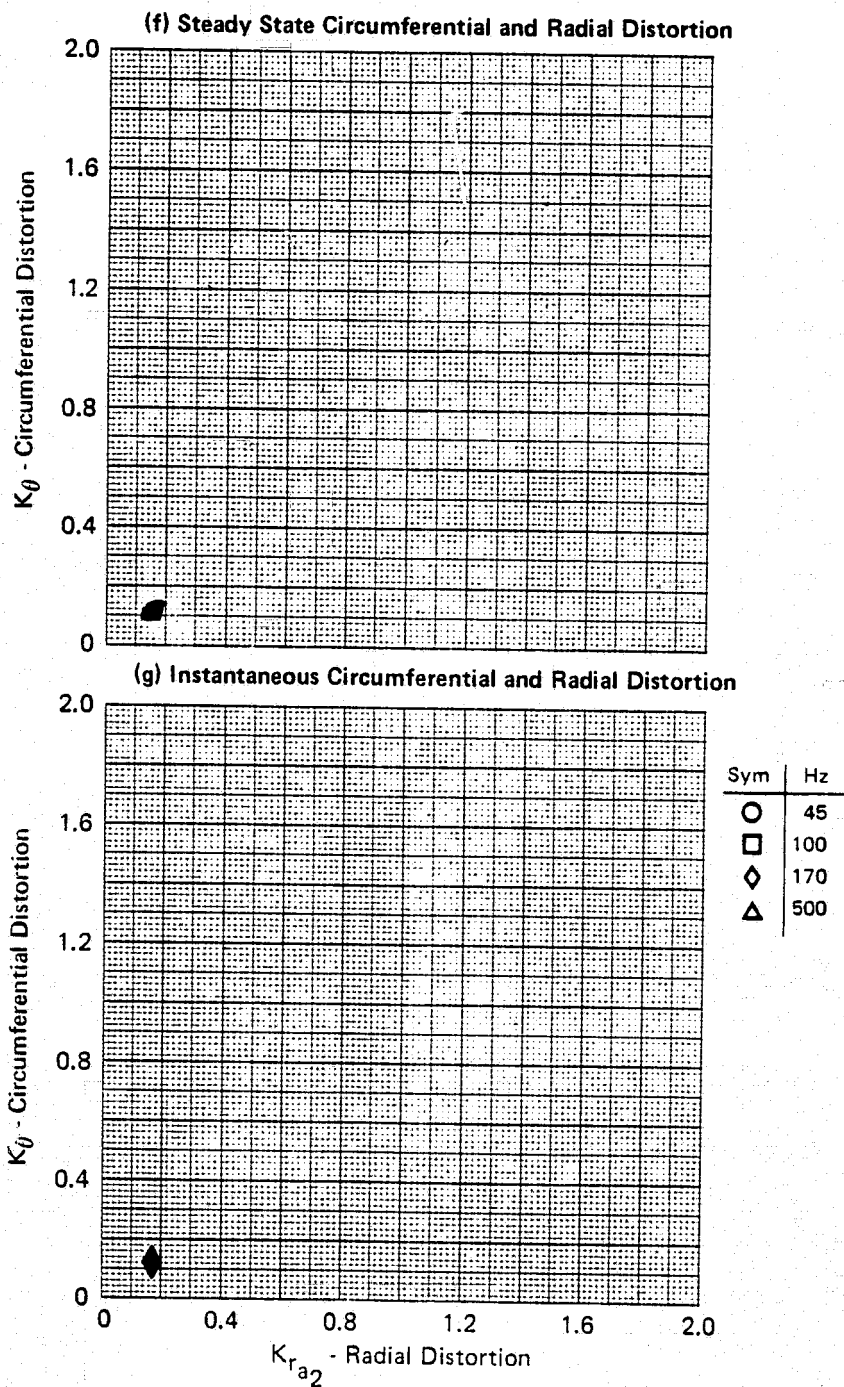
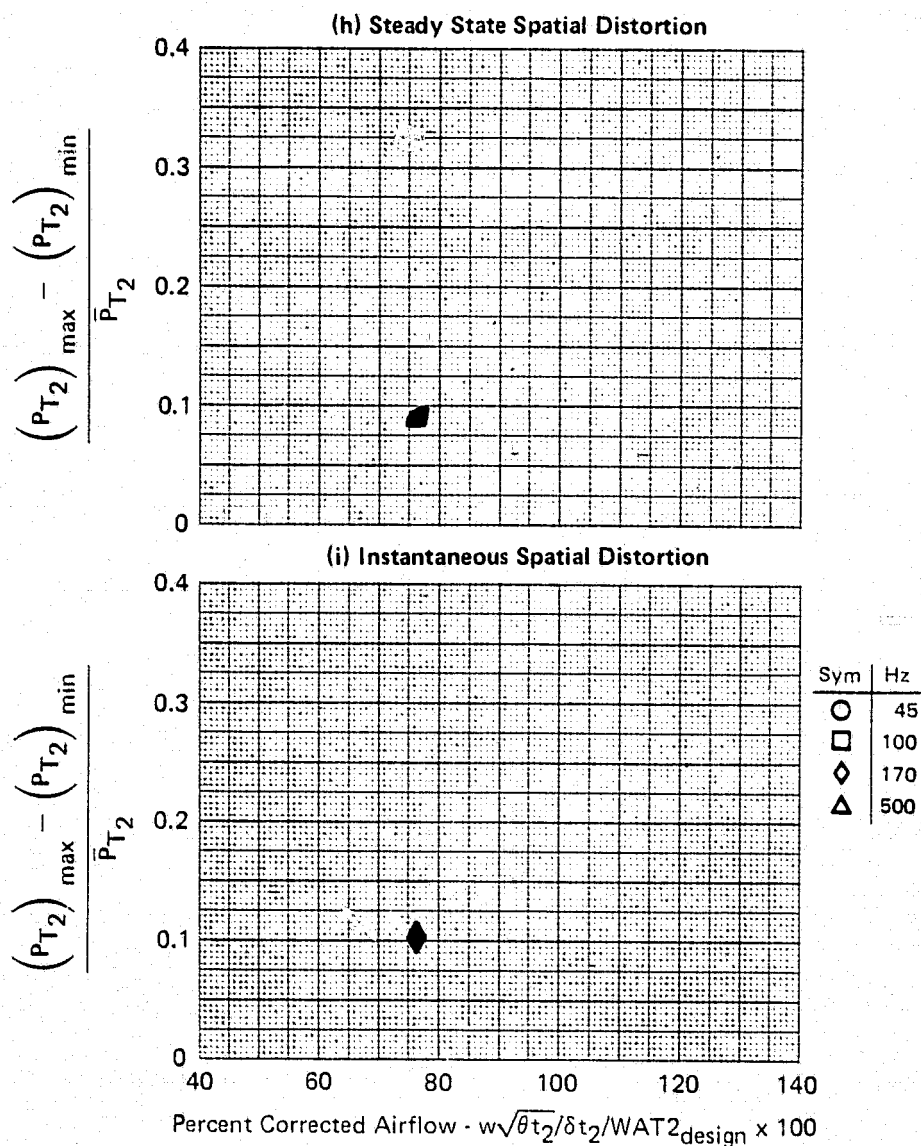


FIGURE G-14 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .60$, $\alpha = 4.6$, $\beta = .6$, WAT2 = 76.2%

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FLIGHT - NASA Data Study
 Part/Point - 424/11 Ident 14-
 RHO DELTA3 BYPASS CIVV
 6.9 11.0 0.0 -25.00



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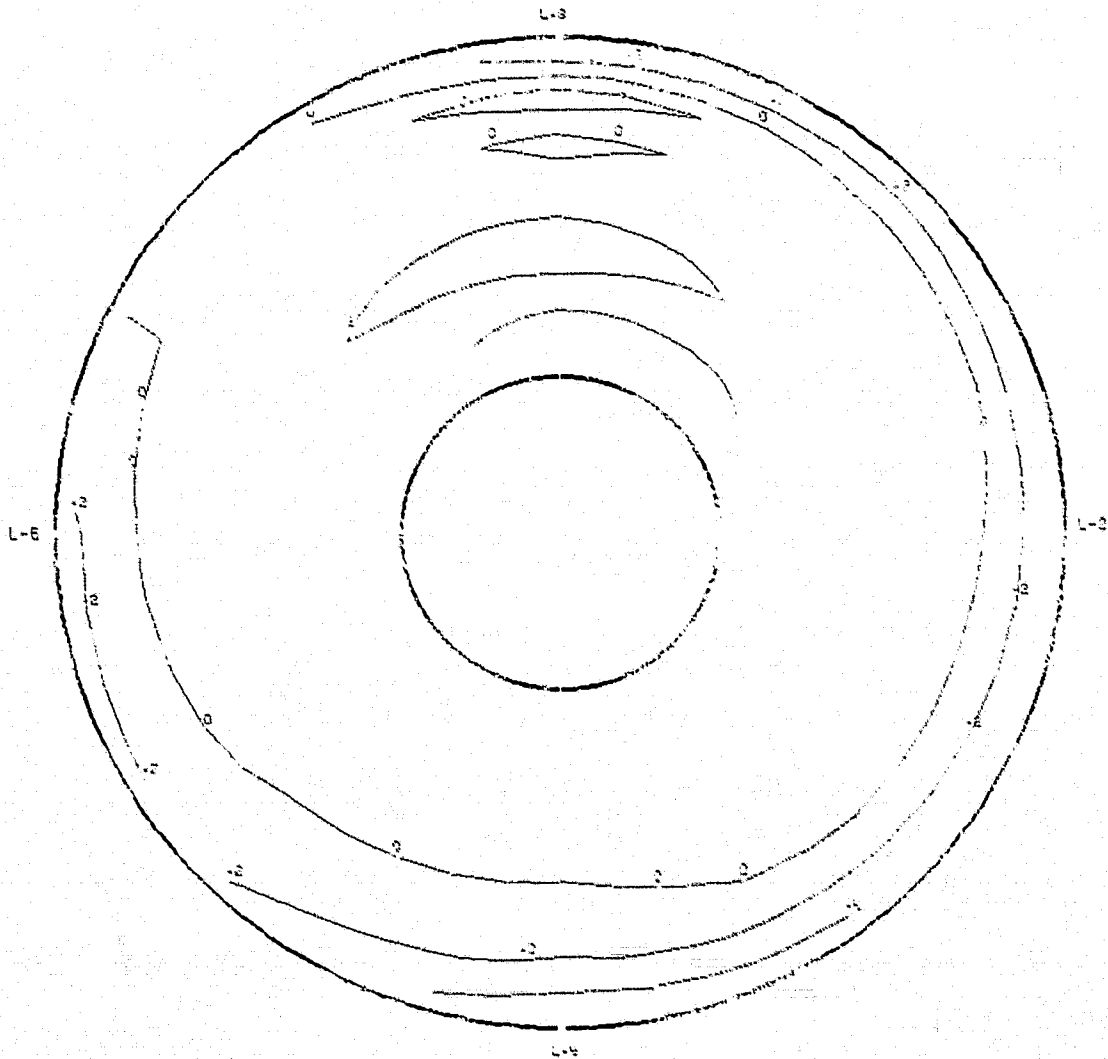
FIGURE G-14 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .60$, $\alpha = 4.6$, $\beta = .6$, $WAT2 = 76.2\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/11 IDENT. 14
THE SEGMENT START TIME WAS AT 04:11:17.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.60	4.6	.6	9066(30219)	6.9	11.0	0.0	76.2%	-25.0
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	RES P	D2
37.92(5.50)	1.0018	.1122	.1596	1.1930	1.3053	.0624	—	.0860

14(j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 37.92 kPa (5.50 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-14 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .6$, $\alpha = 4.6$, $\beta = .6$, $WAT2 = 76.2\%$

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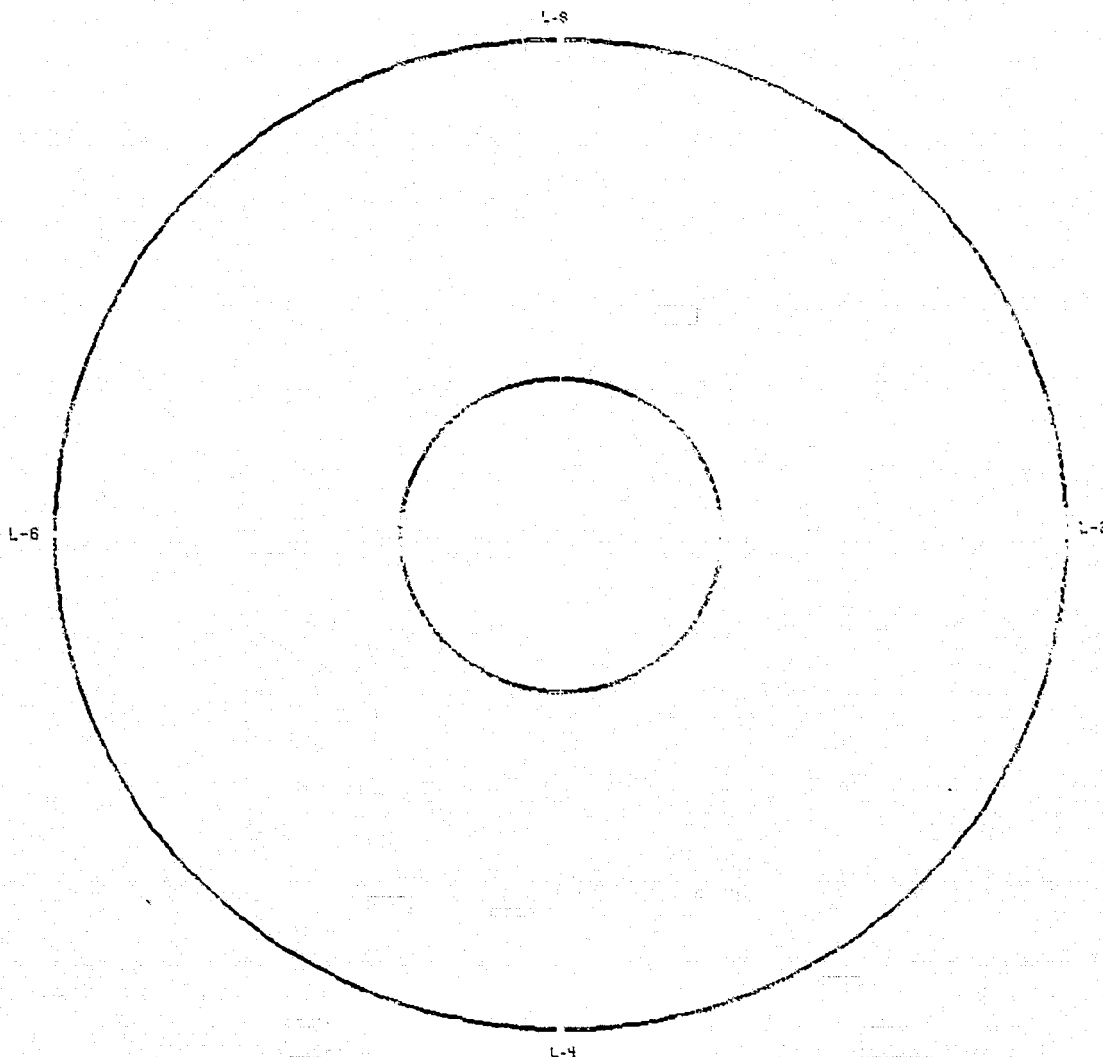
FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/11 IDENT. 14
THE SEGMENT START TIME WAS AT 04:11:17.336

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.60	4.6	.6	9066(30219)	6.9	11.0	0.0	76.2%	-25.0

14(k) Turbulence Contour

170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0017

FIGURE G-14 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .6$, $\alpha = 4.6$, $\beta = .6$, $WAT2 = 76.2\%$

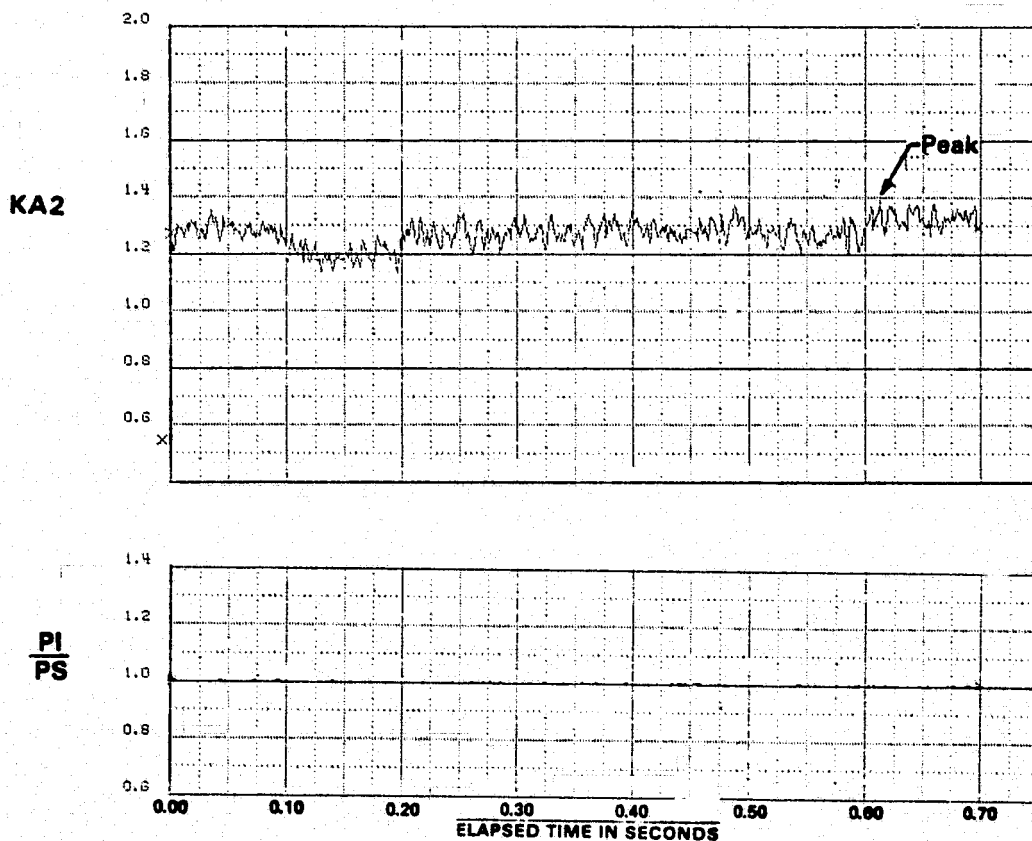
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/11 IDENT. 14
THE SEGMENT START TIME WAS AT 04:11:17.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.60	4.6	.6	9066(30219)	6.9	11.0	0.0	76.2%	-26.0
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
37.92(5.50)	1.0018	1122	.1785	1.3343	1.3951	.0624		.0860

14 (I) Time History Plots 170 Hz



PEAK AT TIME = 0.6123

FIGURE G-14 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .6$, $\alpha = 4.6$, $\beta = .6$, $WAT2 = 76.2\%$

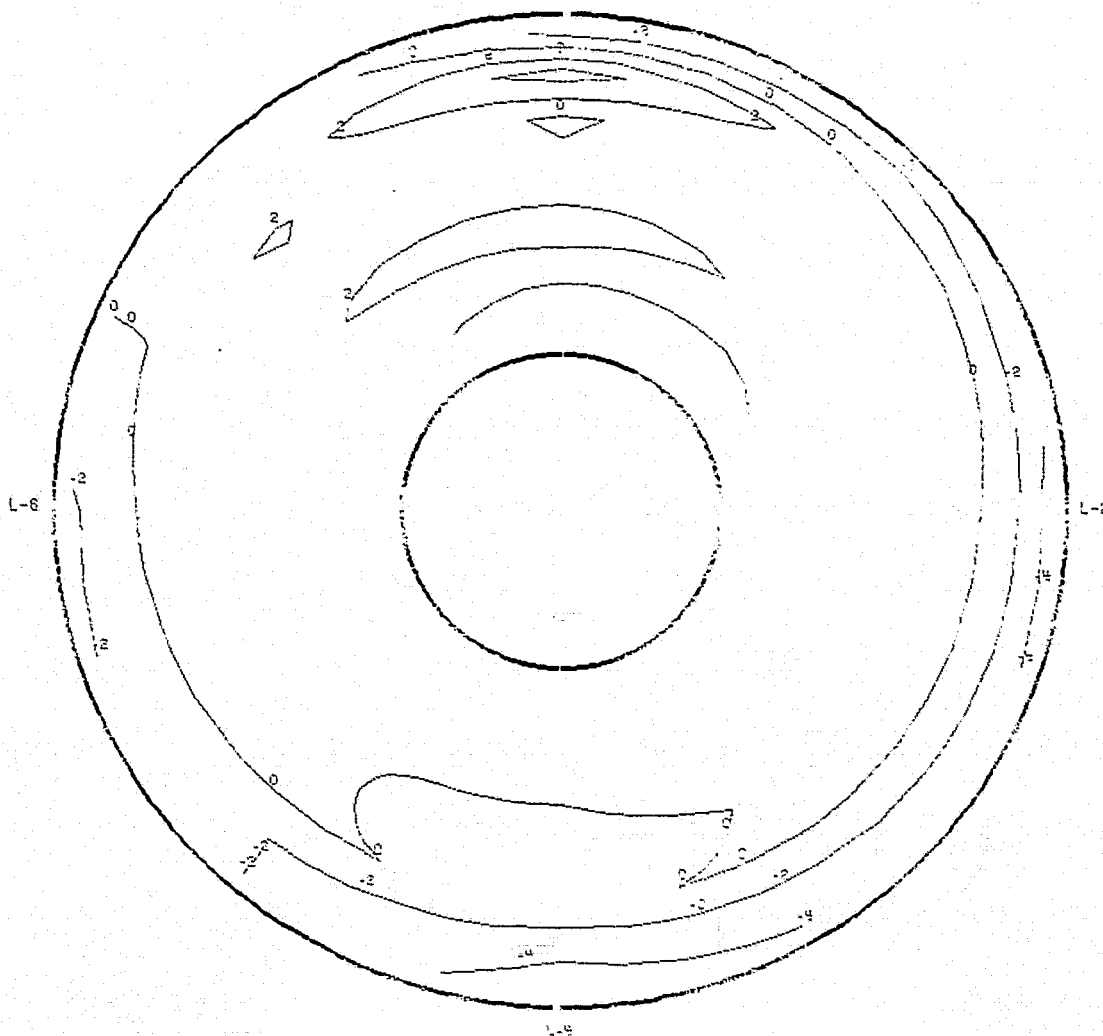
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/11 IDENT. 14
THE SEGMENT START TIME WAS AT 04:11:17.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.60	4.6	.6	9066(30219)	6.9	11.0	0.0	76.2%	-25.0
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
37.92(5.50)	1.0018	1122	1785	1.3343	1.3951	.0624		.0860

14 (m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 37.92 kPa (5.50 PSIA)

NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

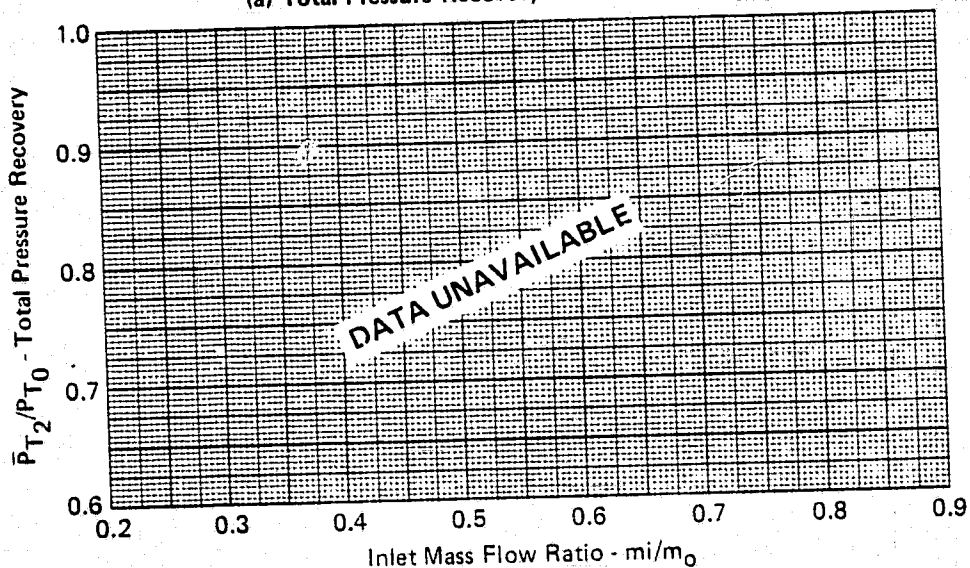
PEAK AT TIME = 0.6123

FIGURE G-14 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .6$, $\alpha = 4.6$, $\beta = .6$, $WAT2 = 76.2\%$

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FLIGHT - NASA Data Study
 Part/Point - 417/3, Ident 15
 RHO DELTA3 BYPASS CIVV
 7.0 27.6 0.0 -5.00

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



(b) Total Pressure Recovery vs Percent Corrected Airflow

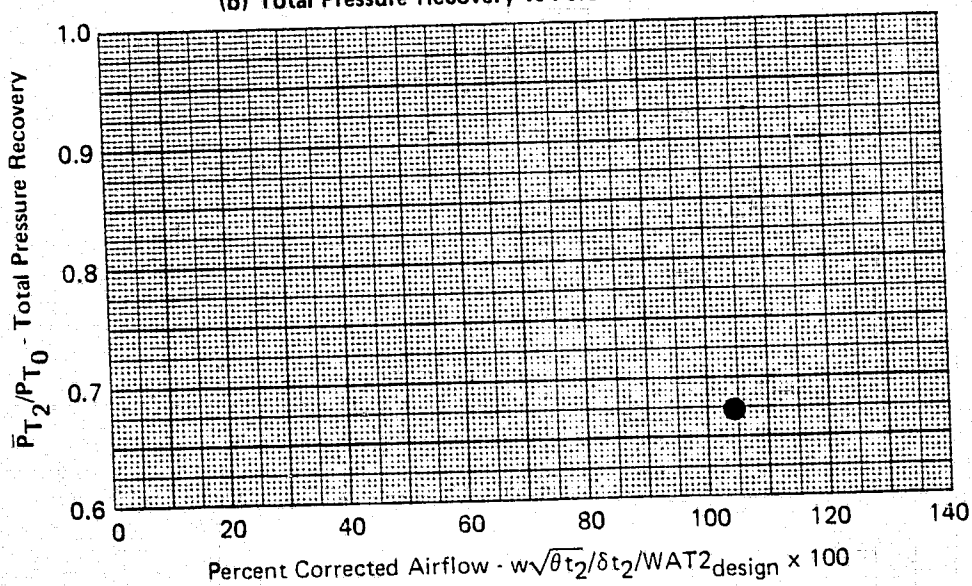
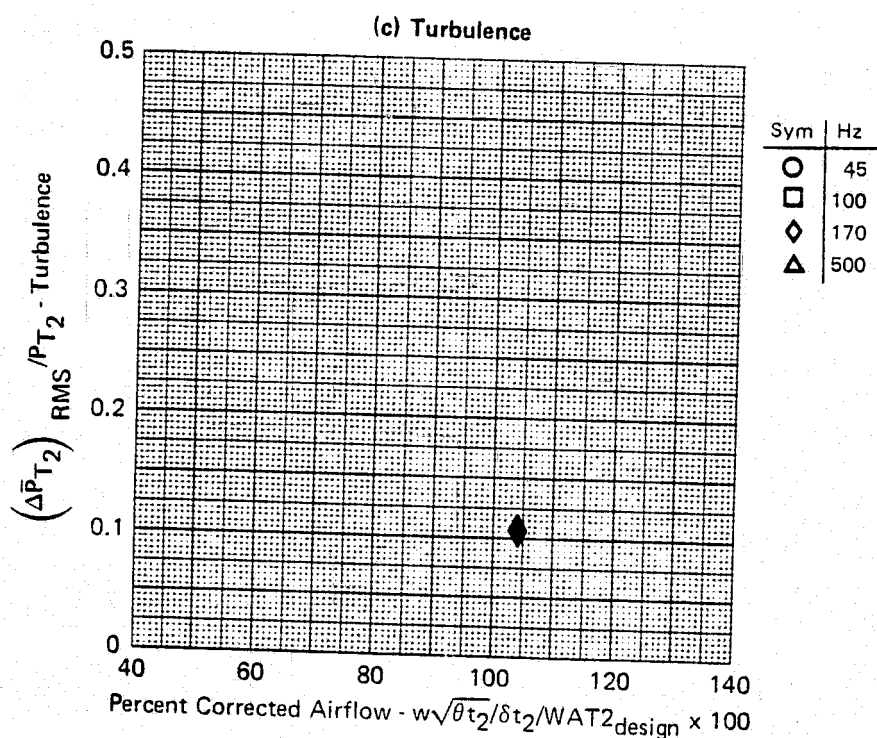


FIGURE G-15
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.85$, $\alpha = 8.8$, $\beta = -0.5$, $WAT2 = 104.2\%$

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FLIGHT - NASA Data Study
 Part/Point - 417/3, Ident 15
 RHO DELTA3 BYPASS CIVV
 7.0 27.6 0.0 -5.00



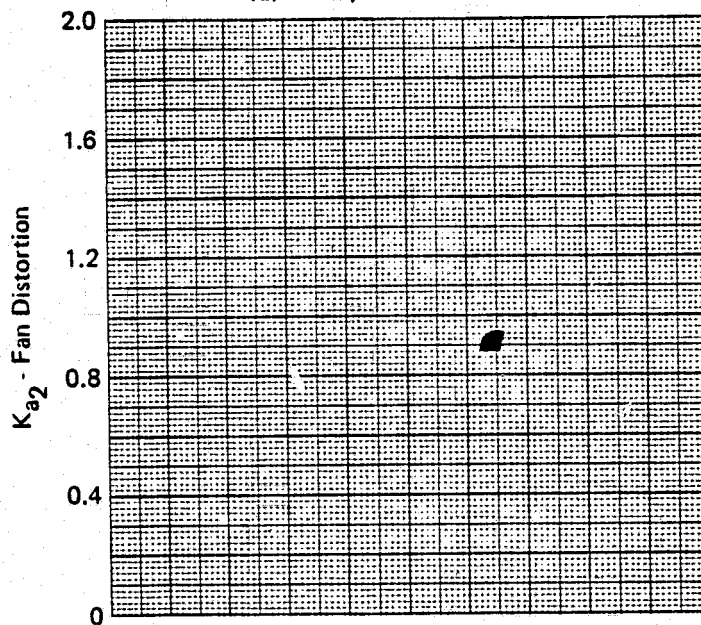
GP77-0658-5

FIGURE G-15 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.85$, $\alpha = 8.8$, $\beta = -.5$, $WAT2 = 104.2\%$

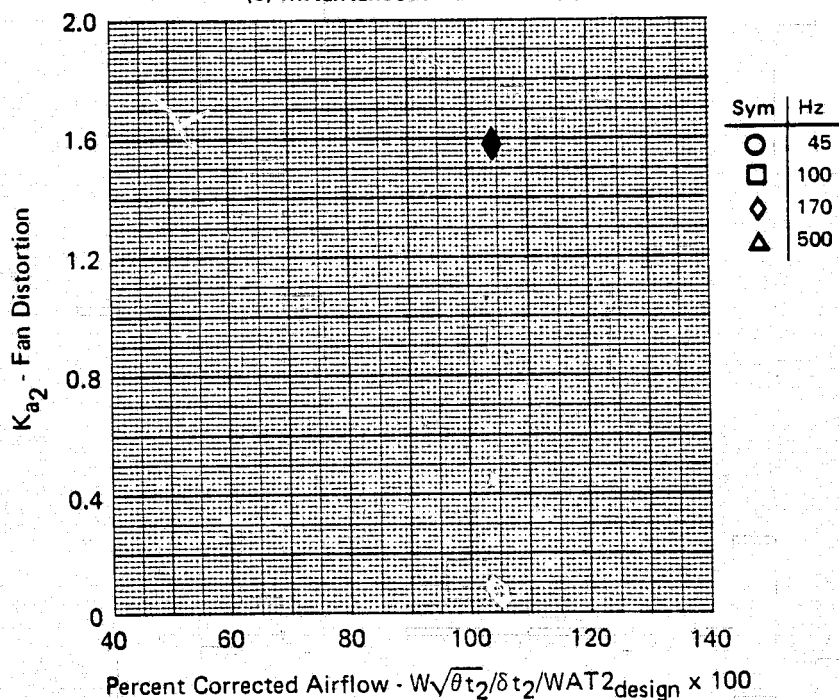
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FLIGHT - NASA Data Study
 Part/Point - 417/3, Ident 15
 RHO DELTA3 BYPASS CIVV
 7.0 27.6 0.0 -5.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion



GP77-0658-3

FIGURE G-15 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.85$, $\alpha = 8.8$, $\beta = -5$, $WAT2 = 104.2\%$

ORIGINAL PAGE IS
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FLIGHT - NASA Data Study
 Part/Point - 417/3, Ident 15
 RHO DELTA3 BYPASS CIVV
 7.0 27.6 0.0 -5.00

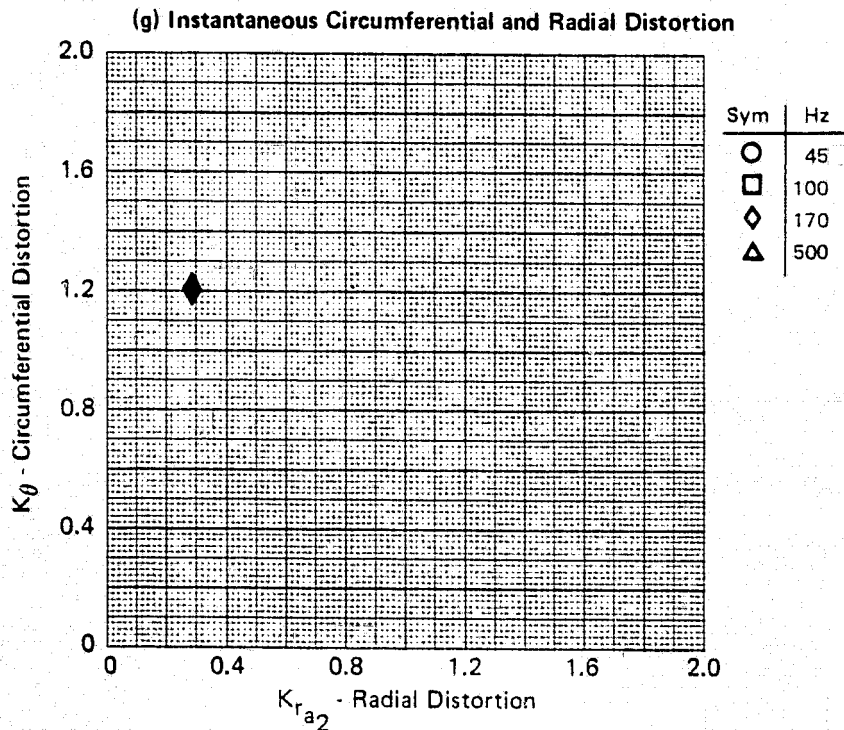
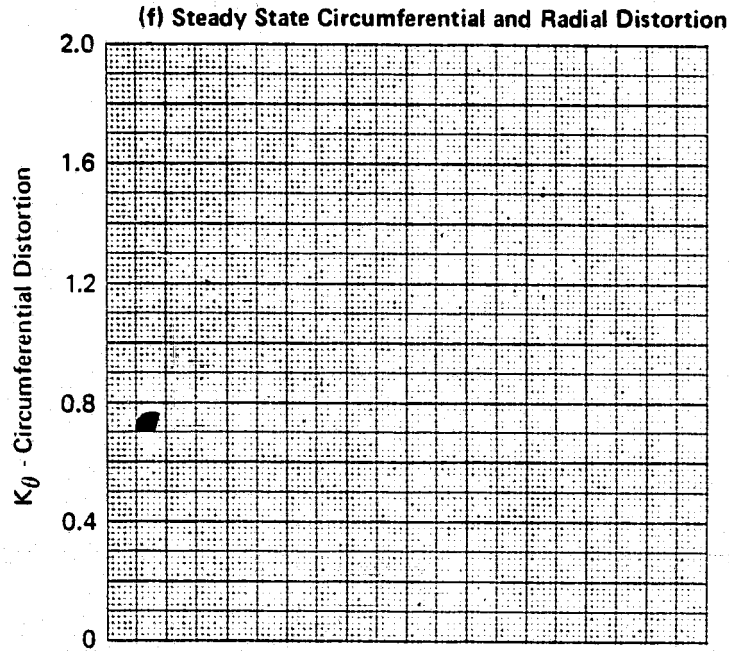
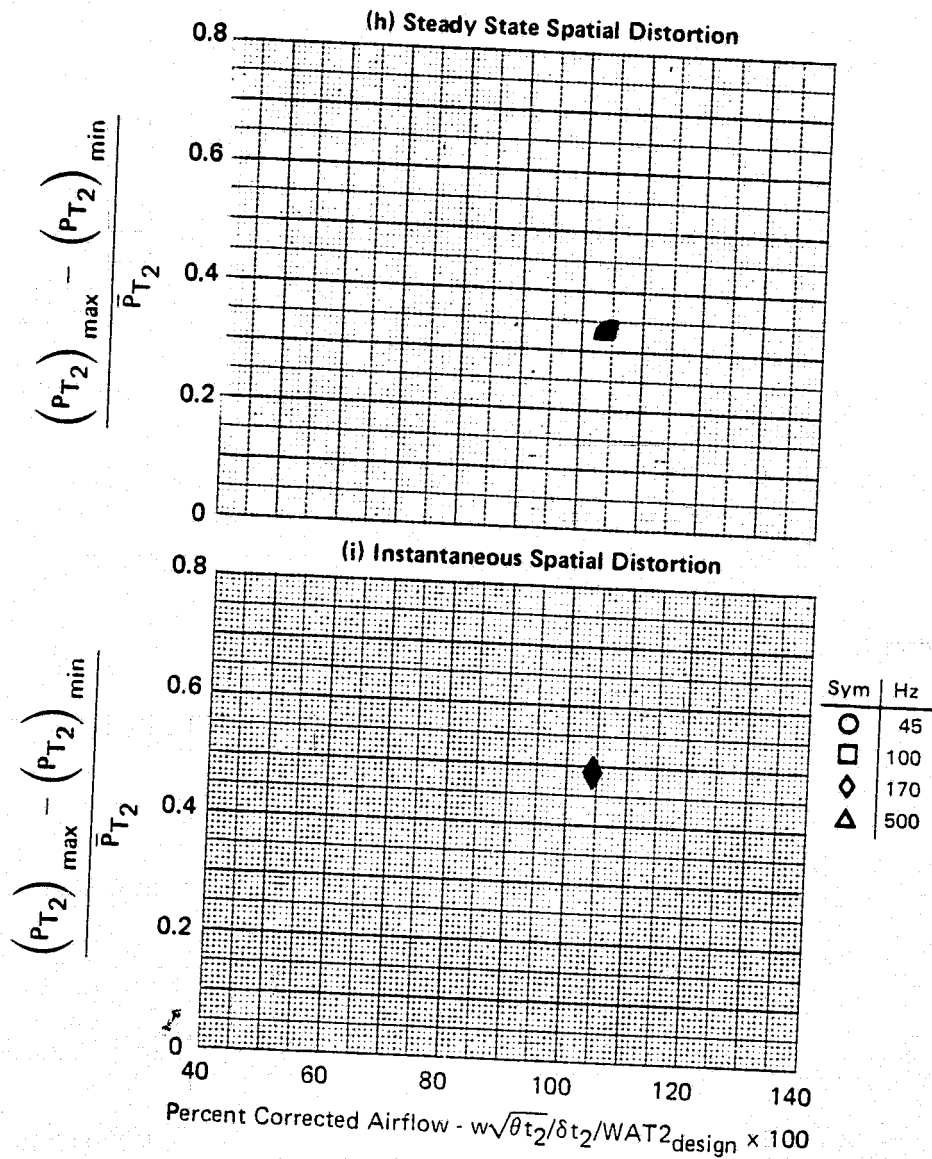


FIGURE G-15 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.85$, $\alpha = 8.8$, $\beta = -0.5$, $WAT2 = 104.2\%$

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FLIGHT - NASA Data Study
 Part/Point - 417/3, Ident 15
 RHO DELTA3 BYPASS CIVV
 7.0 27.6 0.0 -5.00



GP77-0658-4

FIGURE G-15 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.85$, $\alpha = 8.8$, $\beta = -0.5$, $WAT2 = 104.2\%$

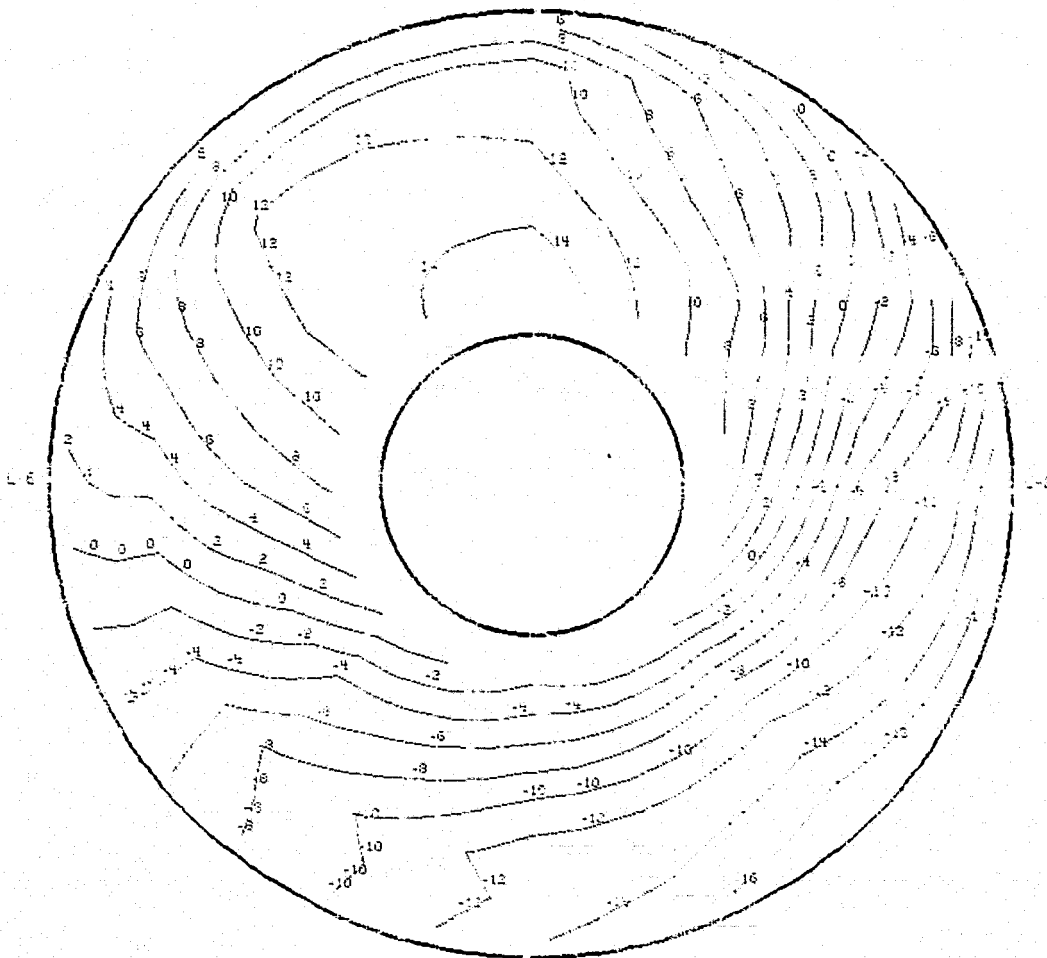
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/3 IDENT. 15
THE SEGMENT START TIME WAS AT 17:14:28.345

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.85	8.8	-0.5	9979(32739)	7.0	27.6	0.0	104.2%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
28.50(4.133)	1.0	.7282	.1386	.1813	.9035	.6332	—	.3342

15 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 28.50 kPa (4.133 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-15 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .85$, $\alpha = 8.8$, $\beta = -.5$, $WAT2 = 104.2\%$

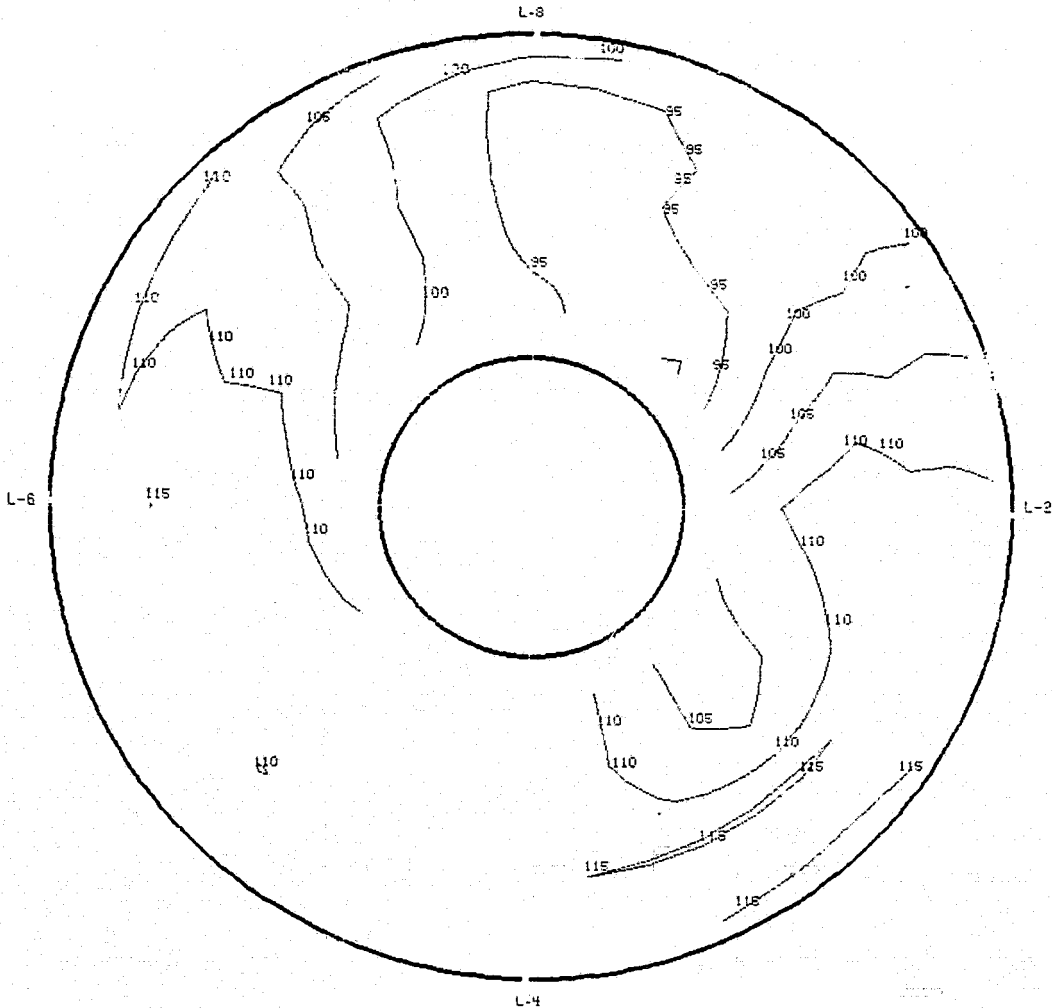
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/3 IDENT. 15
THE SEGMENT START TIME WAS AT 17:14:28.345

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.85	8.8	-0.5	9979(32739)	7.0	27.6	0.0	104.2%	-5.00

15(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.1070

FIGURE G-15 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .85$, $\alpha = 8.8$, $\beta = -.5$, $WAT2 = 104.2\%$

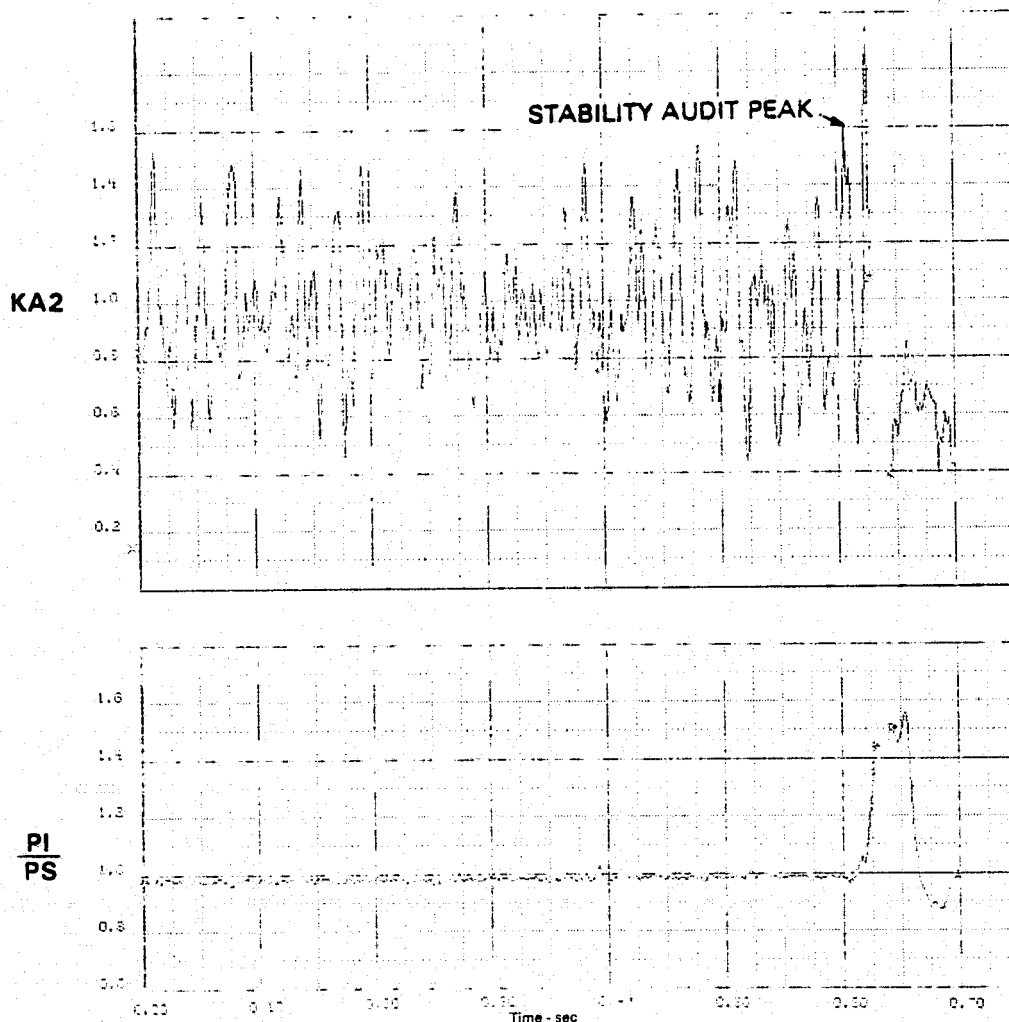
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/3 IDENT. 15
THE SEGMENT START TIME WAS AT 17:14:28.345

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.85	8.8	-0.5	9986(32763)	7.0	27.6	0.0	104.2%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
27.79 (4.030)	.611	1.2159	.2861	.3742	1.5902	1.1529	1.1855	.4971

15 (I) Time History Plots 170 Hz



STABILITY AUDIT PEAK AT TIME = .60678 SECONDS

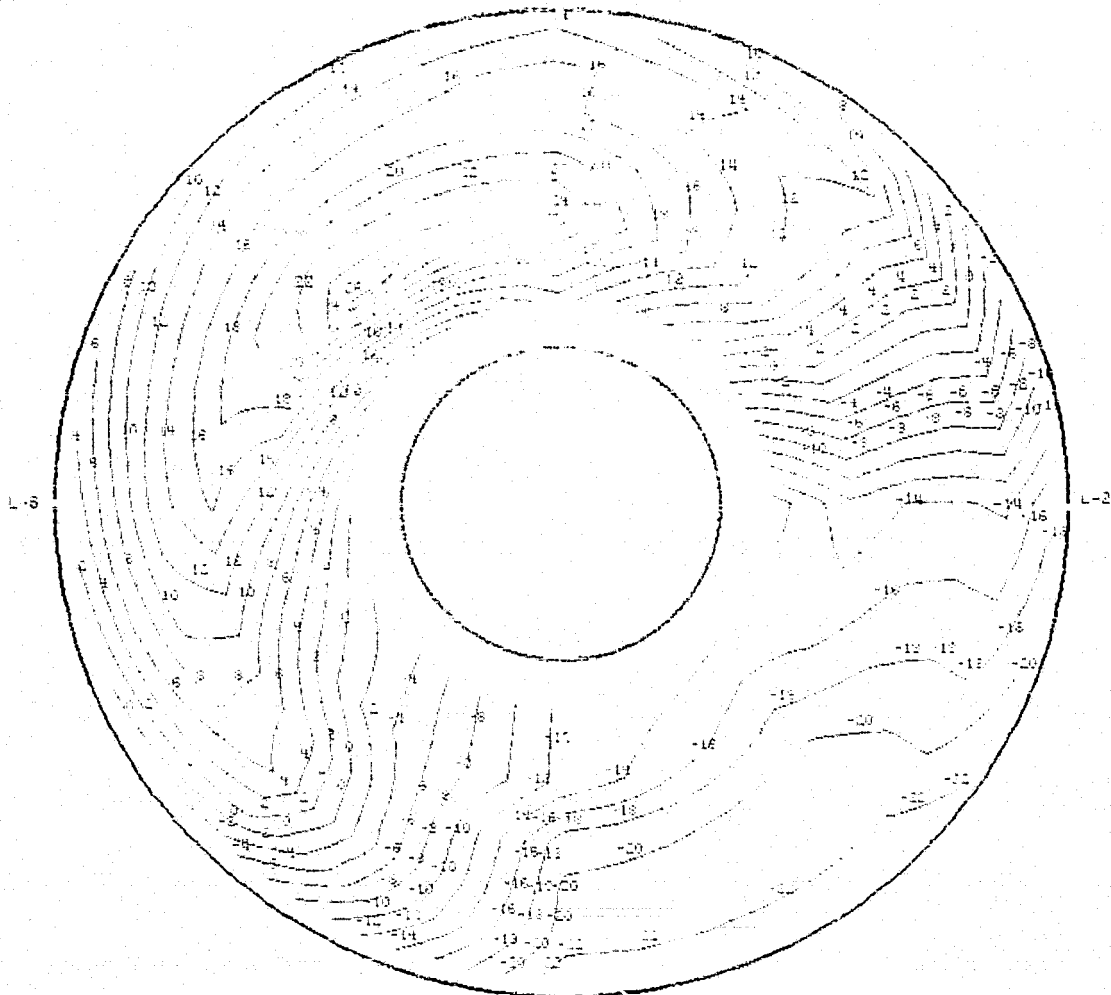
FIGURE G-15 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .85$, $\alpha = 8.8$, $\beta = -0.5$, $WAT2 = 104.2\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/3 IDENT. 15
THE SEGMENT START TIME WAS AT 17:14:28.345

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.85	8.8	-0.5	9986(32763)	7.0	27.6	0.0	104.2%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
27.79 (4.030)	.9751	1.2159	.2861	.3742	1.5902	1.1529	1.1855	.4971

**15(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz**



MEAN FACE PRESSURE = 27.79 kPa (4.030 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.
PEAK AT TIME = .60678 SECONDS

FIGURE G-15 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .85$, $\alpha = 8.8$, $\beta = -.5$, WAT2 = 104.2 %

FLIGHT - NASA Data Study
 Part/Point - 417/1, Ident 16
 RHO DELTA3 BYPASS CIVV
 7.0 26.6 0.0 -5.00

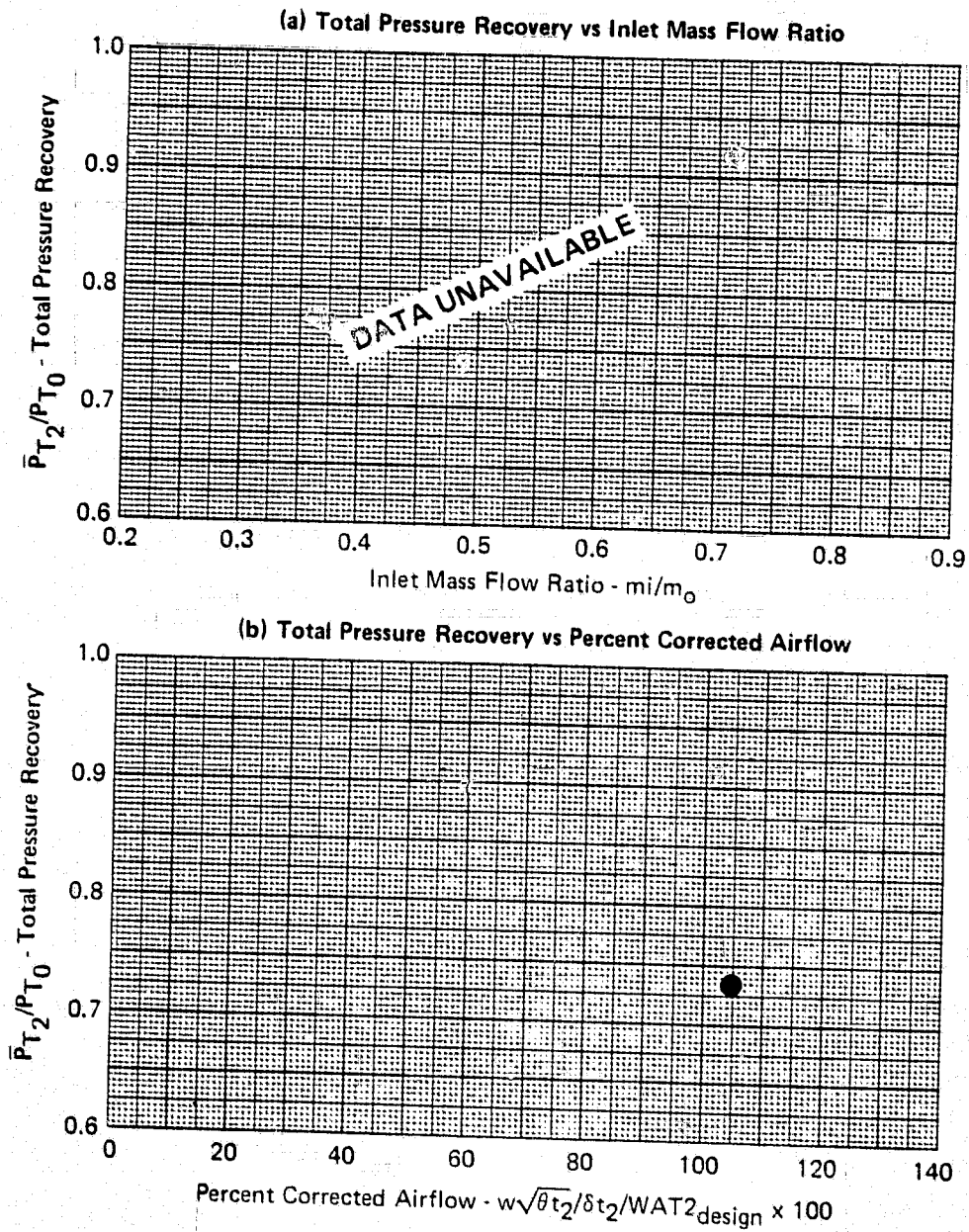
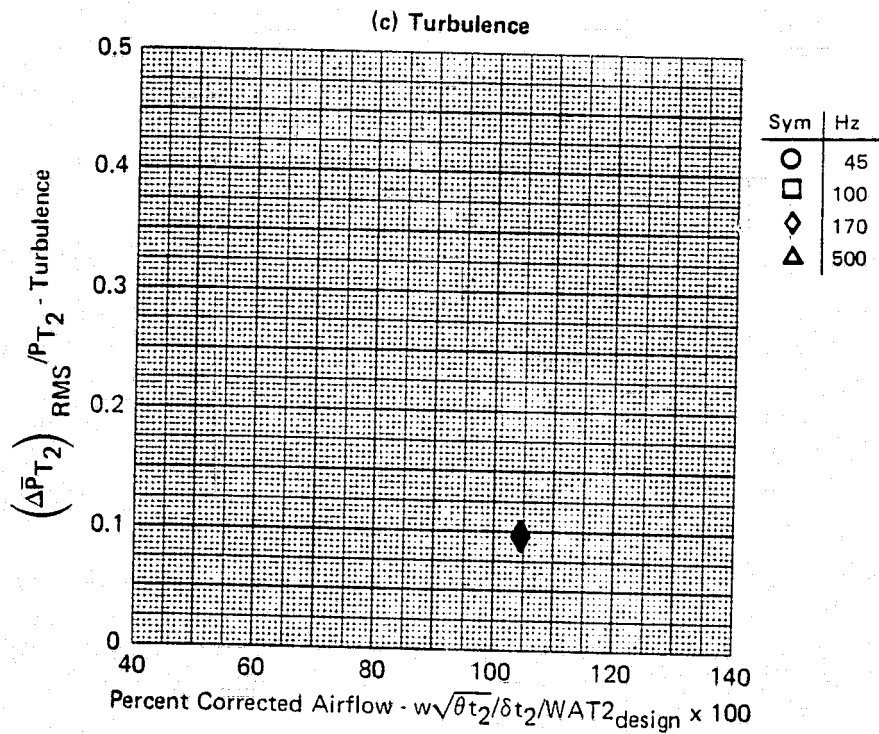


FIGURE G-16
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.92$, $\alpha = 5.6$, $\beta = 0.6$, $WAT2 = 104.5\%$

GP77-0658-1

FLIGHT - NASA Data Study
 Part/Point - 417/1, Ident 16
 RHO DELTA3 BYPASS CIVV
 7.0 26.6 0.0 -5.00



GP77-0658-5

FIGURE G-16 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.92$, $\alpha = 5.6$, $\beta = 0.6$, $WAT2 = 104.5\%$

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FLIGHT - NASA Data Study
 Part/Point - 417/1, Ident 16
 RHO DELTA3 BYPASS CIVV
 7.0 26.6 0.0 -5.00

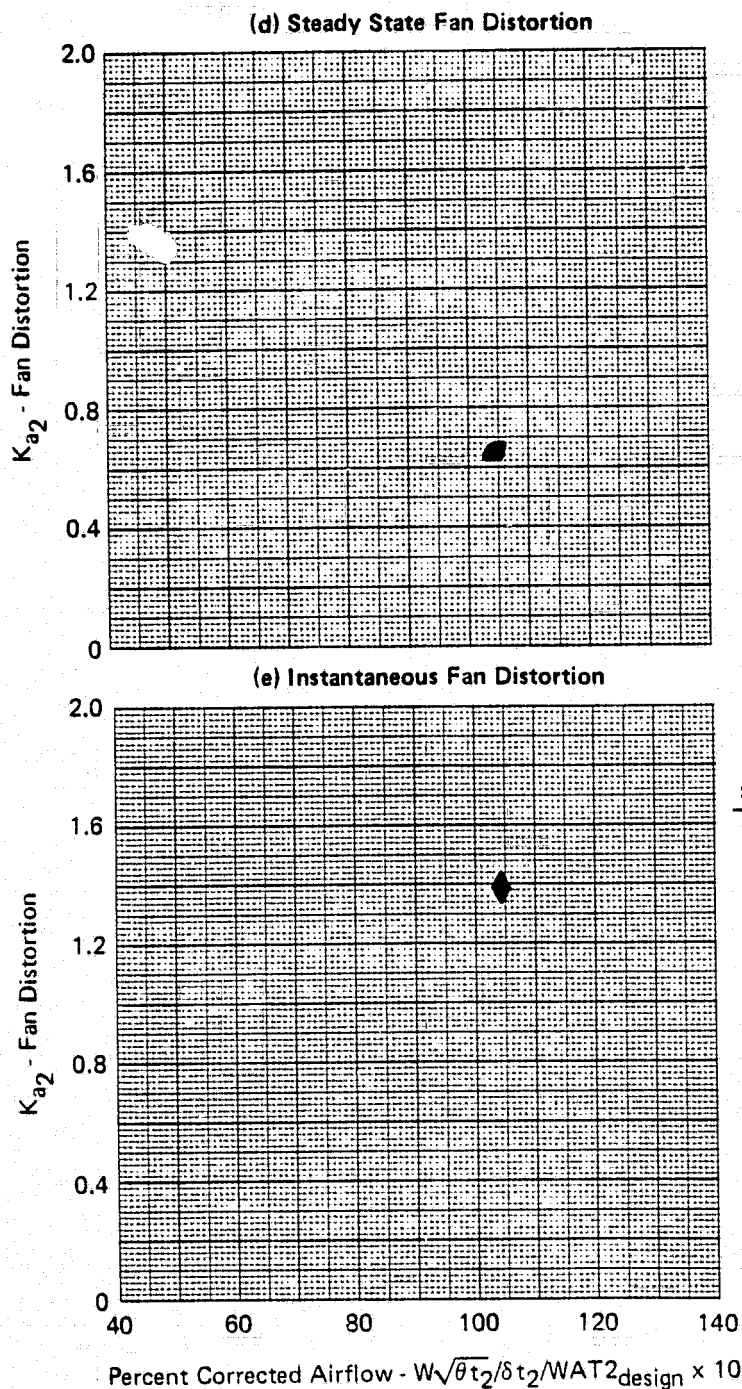


FIGURE G-16 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.92$, $\alpha = 5.6$, $\beta = 0.6$, $WAT2 = 104.5\%$

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FLIGHT - NASA Data Study
 Part/Point - 417/1, Ident 16
 RHO DELTA3 BYPASS CIVV
 7.0 26.6 0.0 -5.00

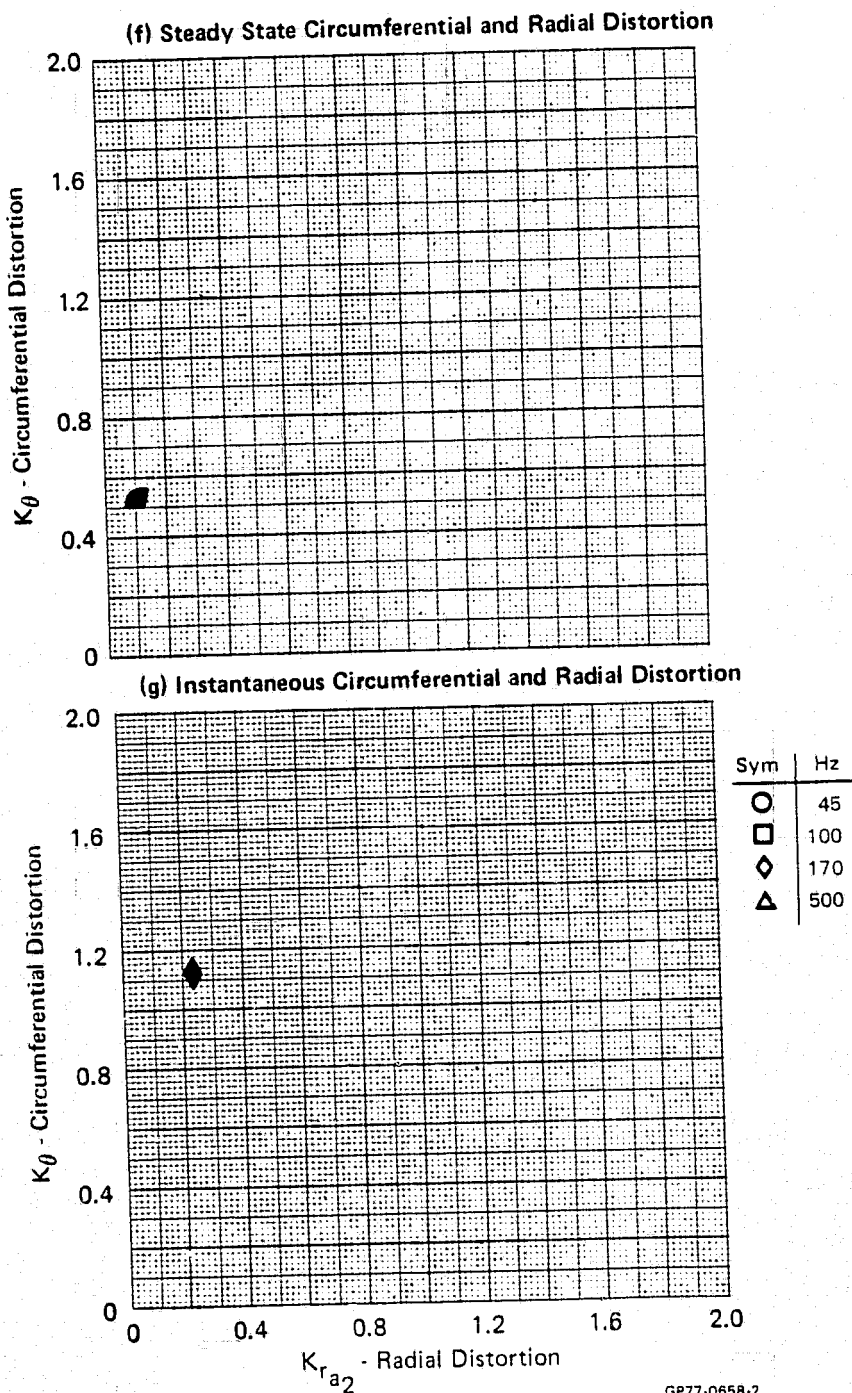


FIGURE G-16 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR ORIGINAL PAGE IS
 $M_0 = 0.92$, $\alpha = 5.6$, $\beta = 0.6$, $WAT2 = 104.5\%$ OF POOR QUALITY

FLIGHT - NASA Data Study
 Part/Point - 417/1, Ident 16
 RHO DELTA3 BYPASS CIVV
 7.0 26.6 0.0 -5.00

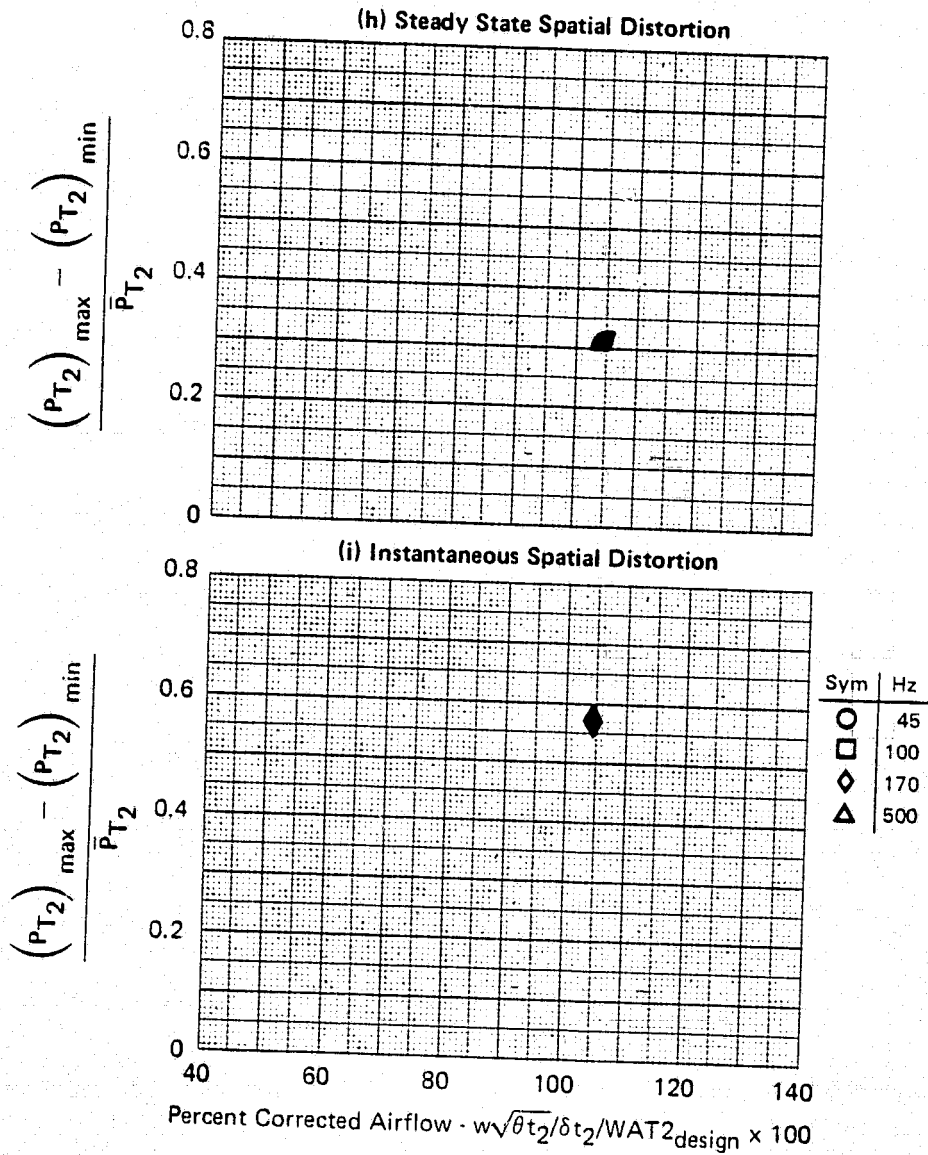


FIGURE G-16 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.92, \alpha = 5.6, \beta = 0.6, WAT2 \approx 104.5 \%$

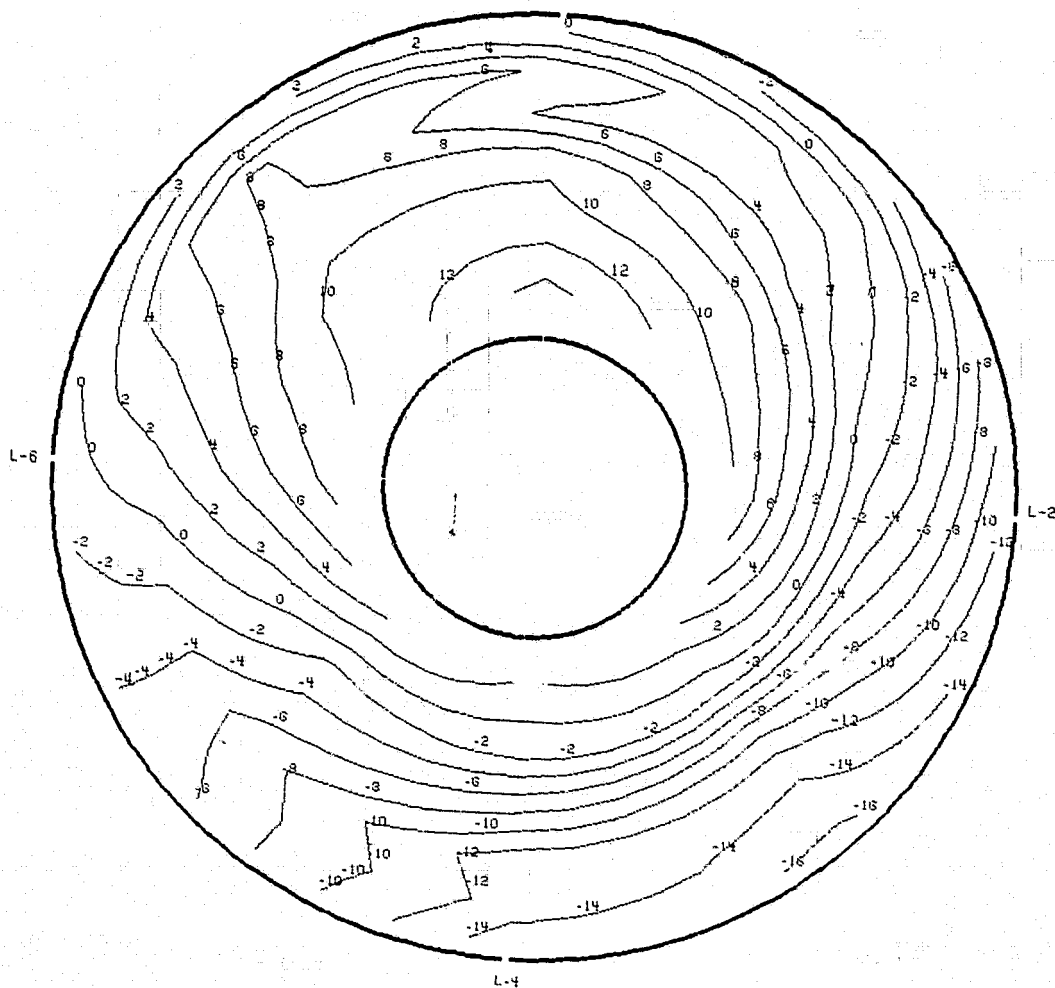
GP77-0658-4

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/1 IDENT. 16
THE SEGMENT START TIME WAS AT 17:04:34.034

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.92	5.6	0.6	15716(51562)	7.0	26.6	0.0	104.5%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
13.58(1.969)	1.0	.5224	.1061	.1308	.6439	.4383		.3119

16(j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 13.58 kPa (1.969 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-16 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .92$, $\alpha = 5.6$, $\beta = 0.6$, WAT2 = 104.5 %

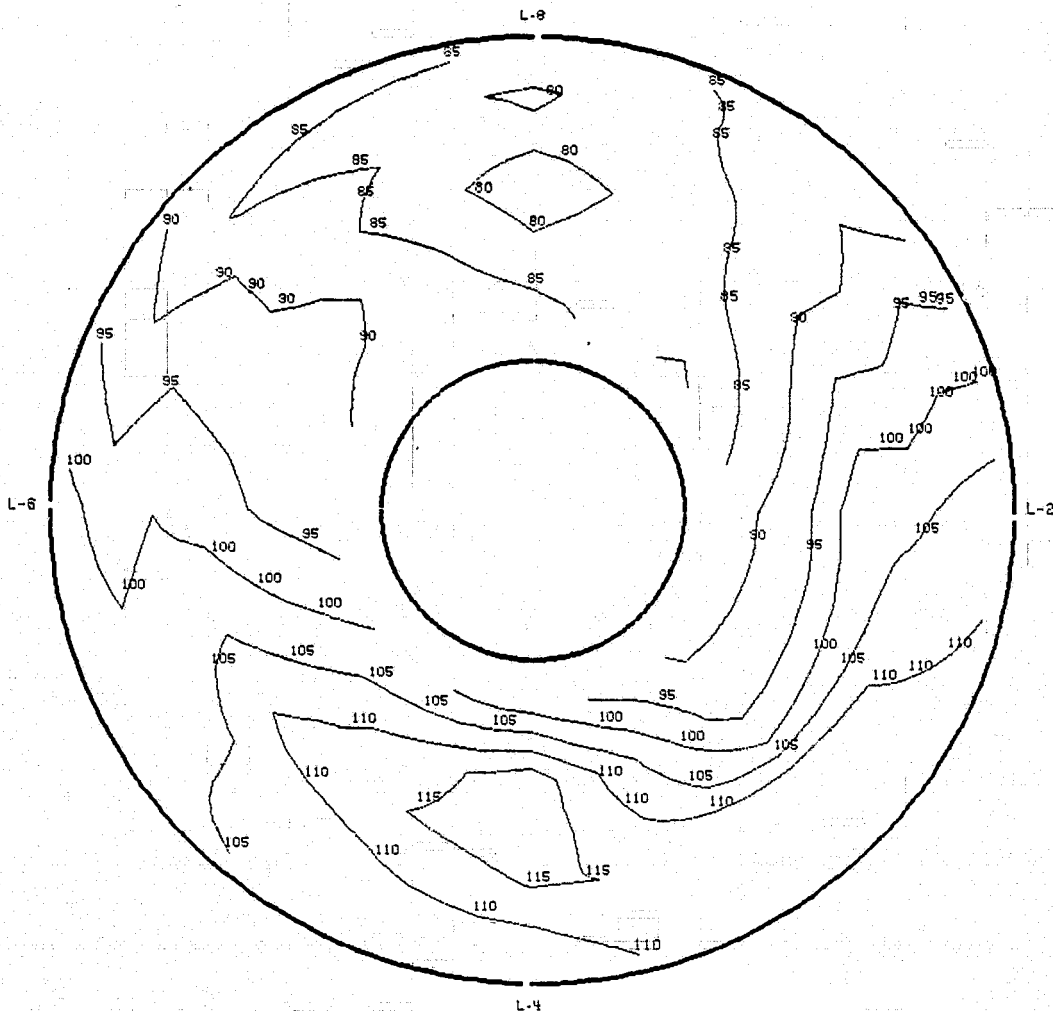
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/1 IDENT. 16
THE SEGMENT START TIME WAS AT 17:04:34.034

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.92	5.6	0.6	15716(51562)	7.0	26.6	0.0	104.5%	-5.00

16(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0968

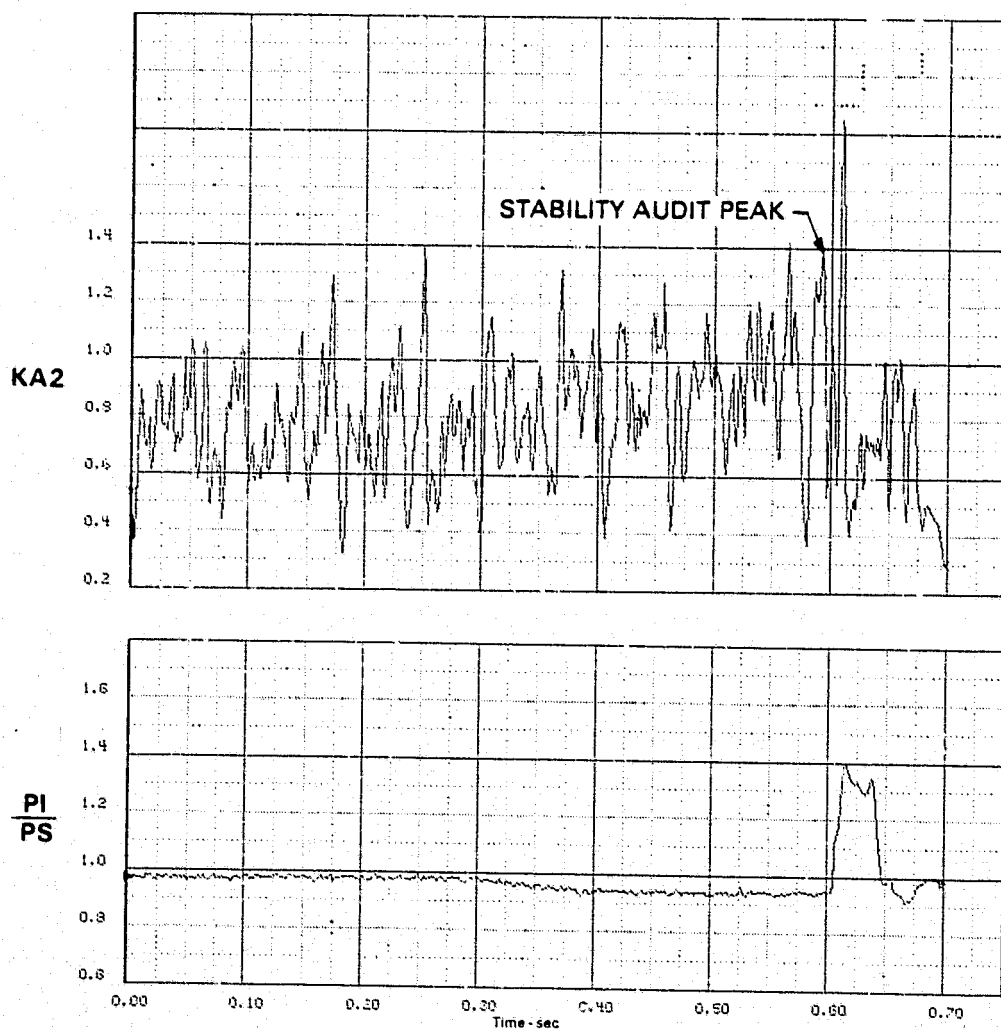
FIGURE G-16 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .92$, $\alpha = 5.6$, $\beta = 0.6$, $WAT2 = 104.5\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/1 IDENT. 16
THE SEGMENT START TIME WAS AT 17:04:34.034

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.92	5.6	0.6	15716(51563)	7.0	26.6	0.0	104.5%	-5.00
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	K0SP	D2
12.62 (1.830)	.9294	1.1336	.2269	.2589	1.3925	.8277	.9970	.5756

16(l) Time History Plots
170 Hz



STABILITY AUDIT PEAK AT TIME = .59233 SECONDS

FIGURE G-16 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .92$, $\alpha = 5.6$, $\beta = 0.6$, WAT2 = 104.5 %

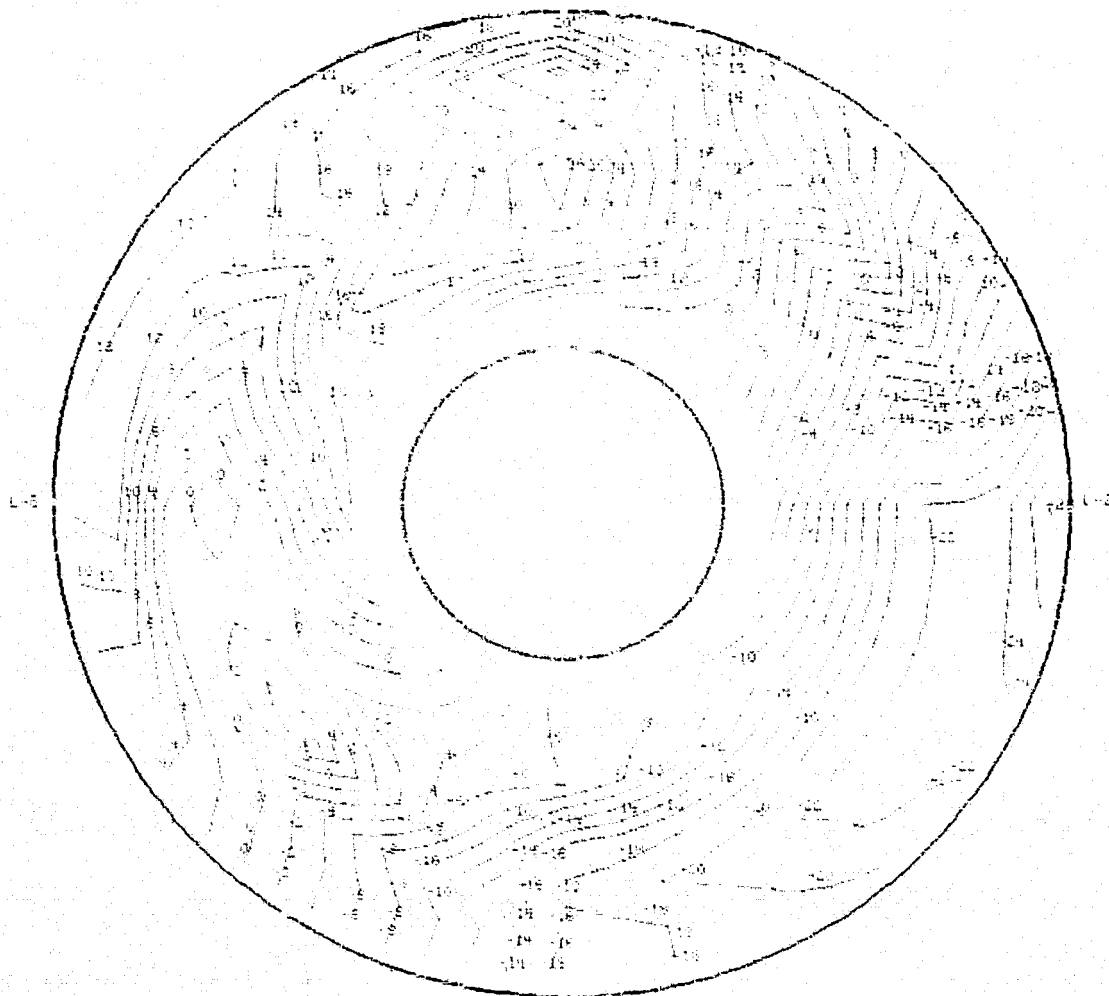
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 417/1 IDENT. 16
THE SEGMENT START TIME WAS AT 17:04:34.034

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.92	5.6	0.6	15716(51563)	7.0	26.6	0.0	104.5%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
12.62 (1.830)	.9294	1.1336	.2269	.2589	1.3925	.8277	.9970	.5756

16(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 15.65 kPa (2.270 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.59233 SECONDS

FIGURE G-16 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .92$, $\alpha = 5.6$, $\beta = 0.6$, WAT2 = 104.5 %

SERIES VII NASA Data Study
 Part/Point - 157/7, Ident 17
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -25.00

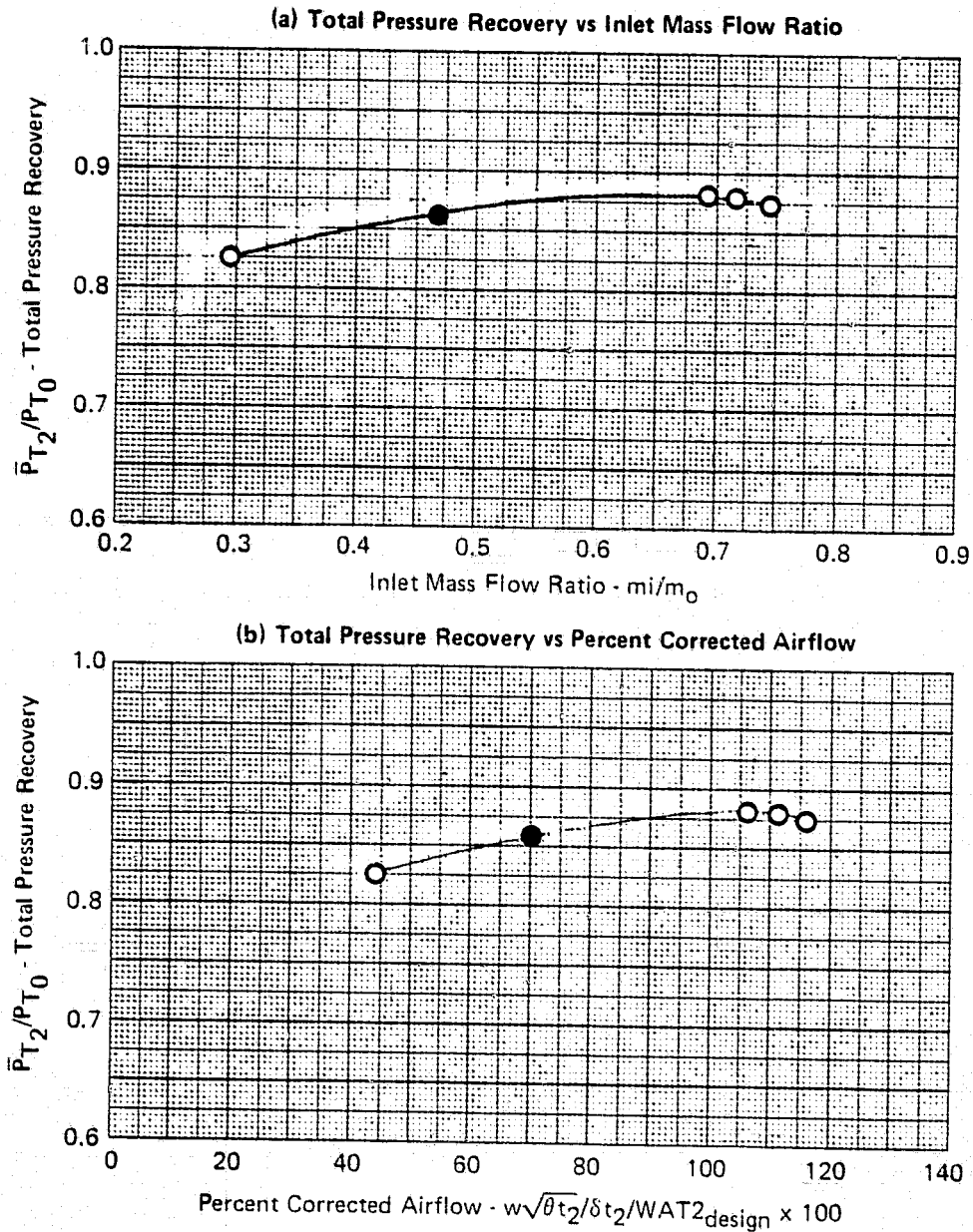
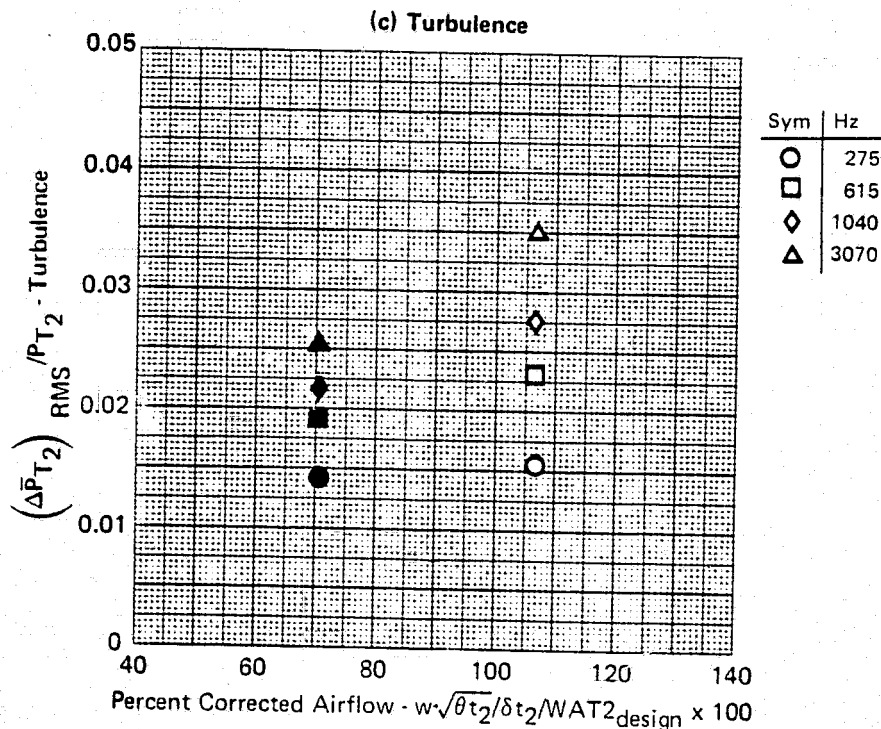


FIGURE G-17
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = -10, \beta = 10, WAT2 = 70.2 \%$

GP77-0658-1

SERIES VII - NASA Data Study
 Part/Point - 157/7, Ident 17
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -25.00



GP77-0658-5

FIGURE G-17 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = -10$, $\beta = 10$, $WAT2 = 70.2\%$

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SERIES VII - NASA Data Study
 Part/Point - 157/7, Ident 17
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -25.00

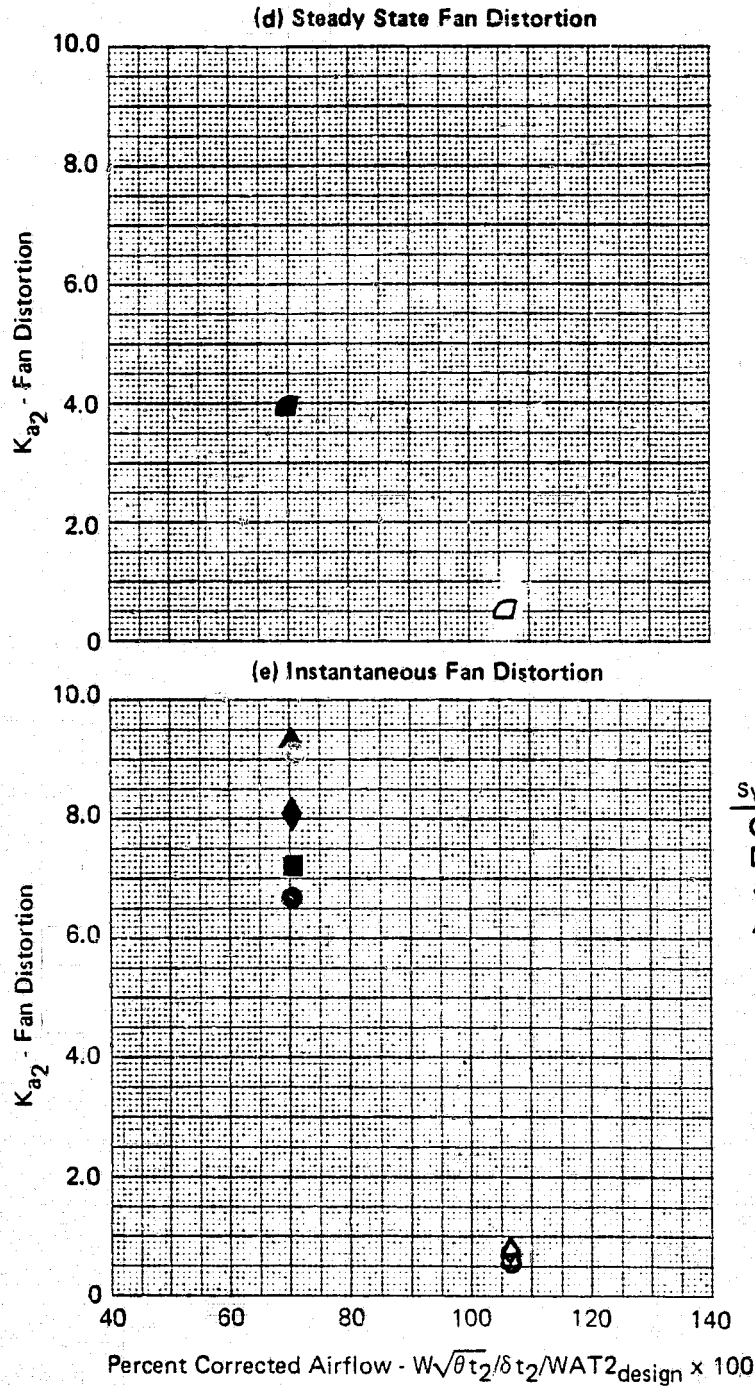


FIGURE G-17 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = -10, \beta = 10, WAT2 = 70.2\%$

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SERIES VII - NASA Data Study
 Part/Point - 157/7, Ident 17
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -25.00

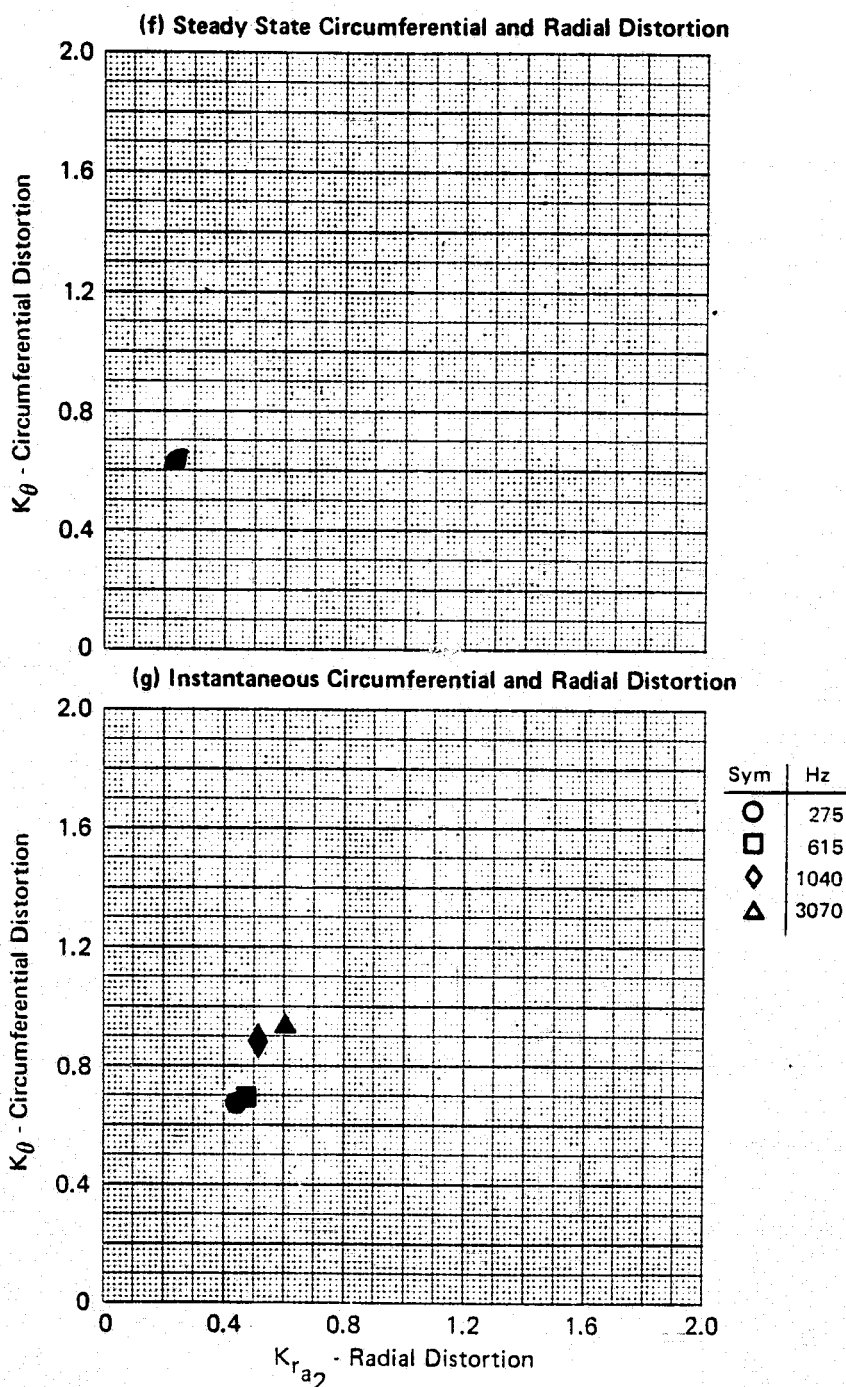
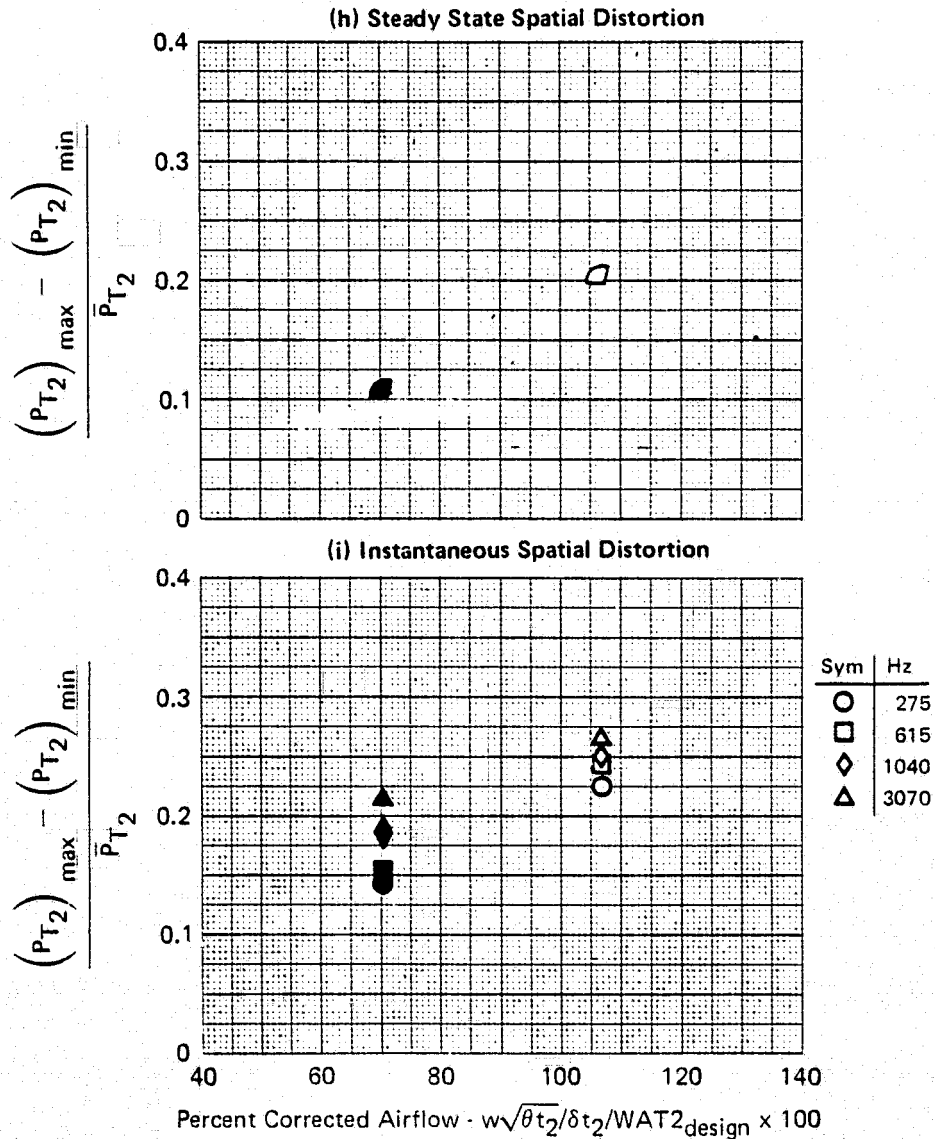


FIGURE G-17 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = -10$, $\beta = 10$, WAT2 = 70.2 %

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C-3

SERIES VII - NASA Data Study
 Part/Point - 157/7, Ident 17
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -25.00



GP77-0658-4

FIGURE G-17 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = -10$, $\beta = 10$, $WAT2 = 70.2\%$

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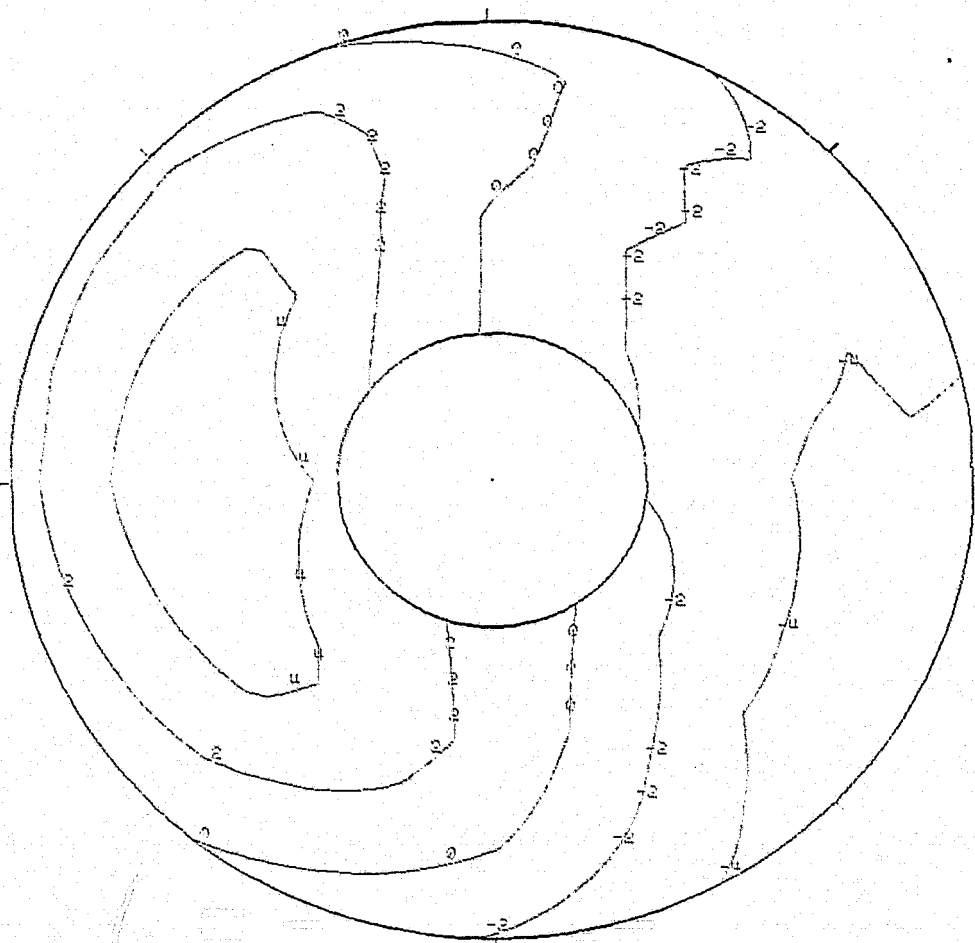
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 7 IDENT. 17
THE SEGMENT START TIME WAS AT 20:10:57.045

MACH 0.9	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 70.2%	C1VV -25.0
PI 44.30 (6.425)	PI/PS 1.000	KTHETA 0.632	KPA2 0.234	SKPA2 3.294	KP2 3.926	KC2 0.639	K6SP 0.645
							D2 0.105

17 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 44.30 kPa (6.425 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-17 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 70.2$ %

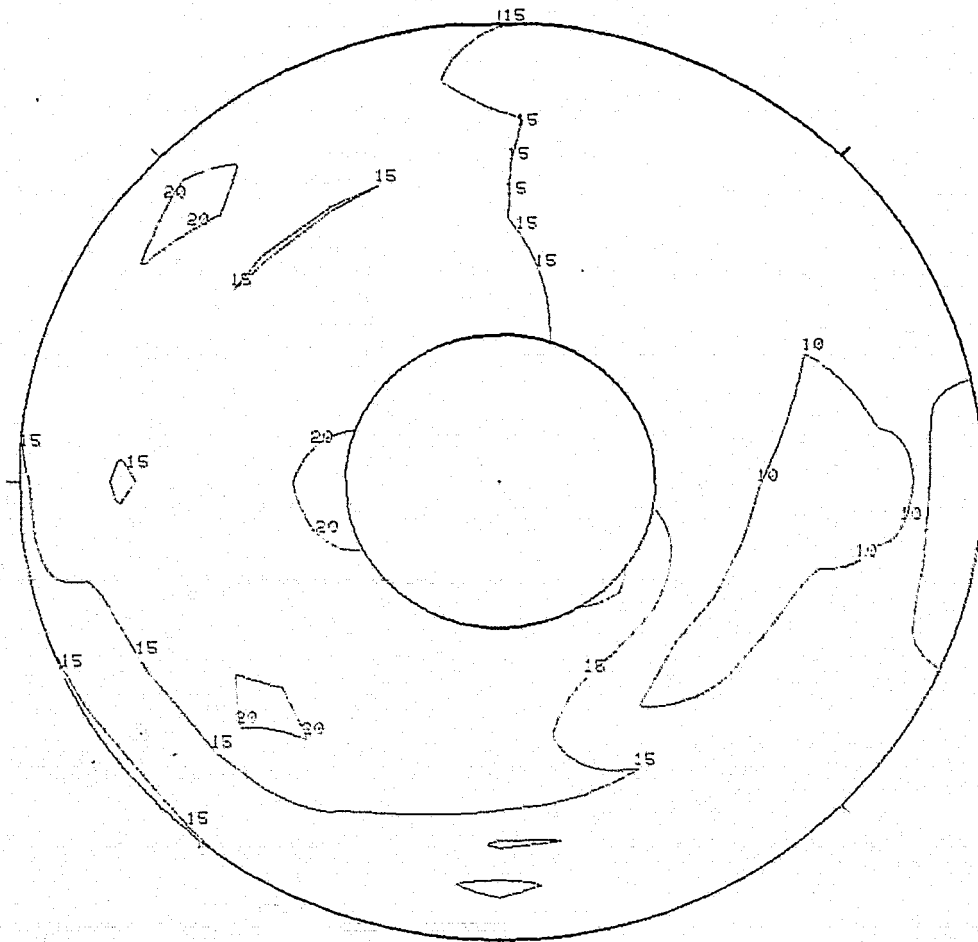
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 7 IDENT. 17
THE SEGMENT START TIME WAS AT 20:10:57.045

MACH 0.9	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 70.2%	CIVV -25.0
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17(k) Turbulence Contour 275 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01430

FIGURE G-17 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 70.2 %

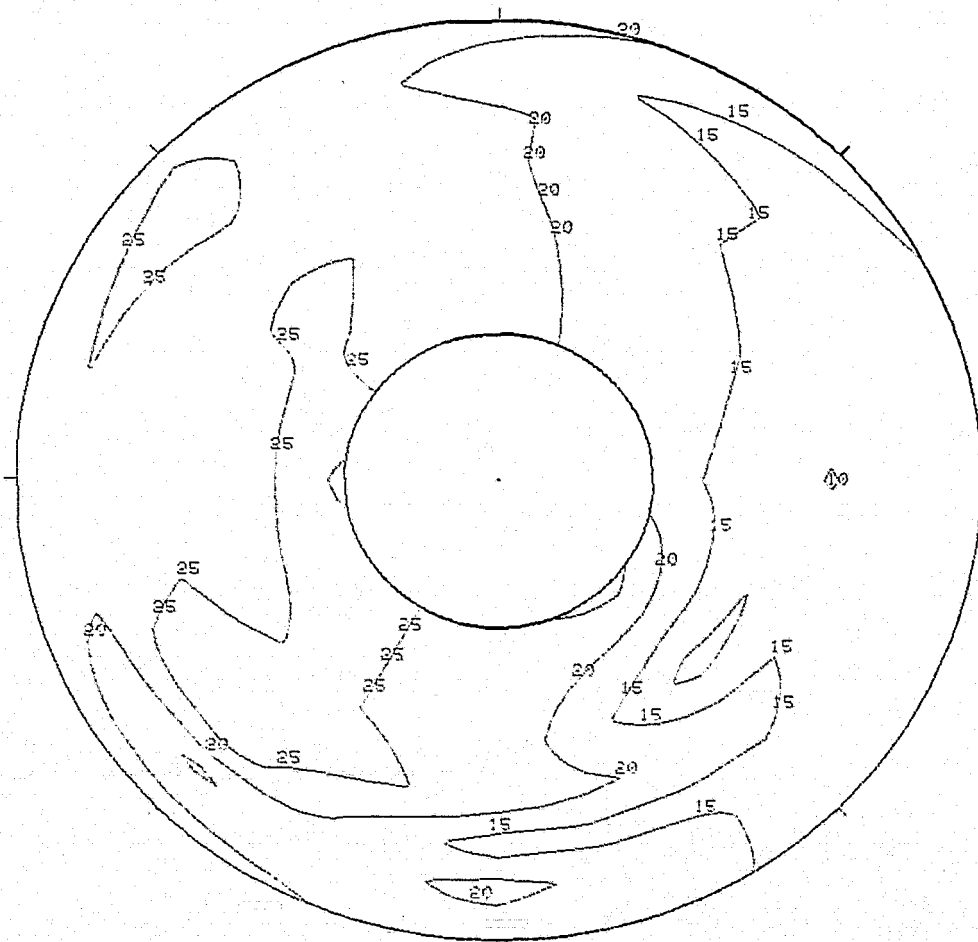
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 7 IDENT. 17
THE SEGMENT START TIME WAS AT 20:10:57.045

MACH 0.9	ALPHA -10	BETA 10	RHO -3.7	DELTA3 10.6	BYPASS 0.9	WAT2 70.2%	CIVV -25.0
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17(I) Turbulence Contour 615 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01920

FIGURE G-17 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 70.2 %

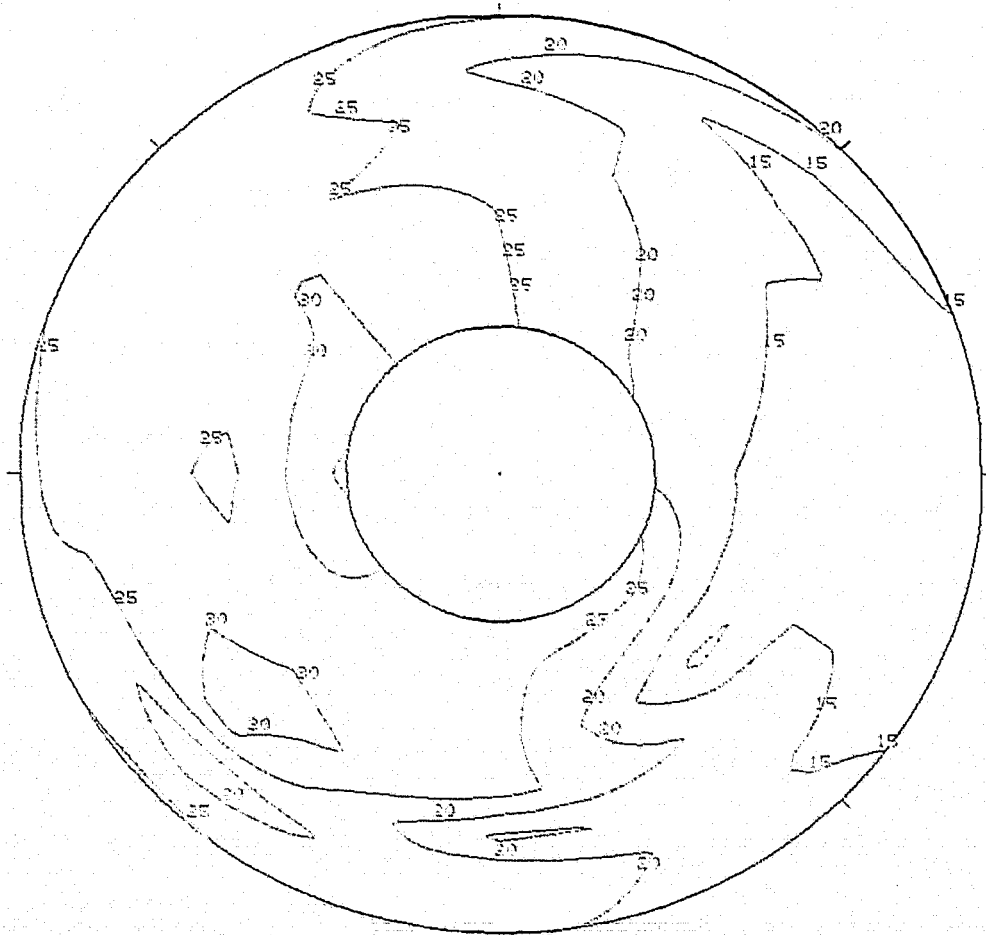
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 7 IDENT. 17
THE SEGMENT START TIME WAS AT 20:10:57.053

MACH	ALPHA	BETA	PHI	DELTA	BYPASS	WAT2	CIVV
0.9	-10	10	-3.0	10.5	0.0	70.2%	-25.0

17(m) Turbulence Contour 1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02172

FIGURE G-17 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 70.2\%$

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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 7 IDENT. 17
THE SEGMENT START TIME WAS AT 20:10:57.053

MACH
0.9

ALPHA
-10

BETA
10

RHO
-3.0

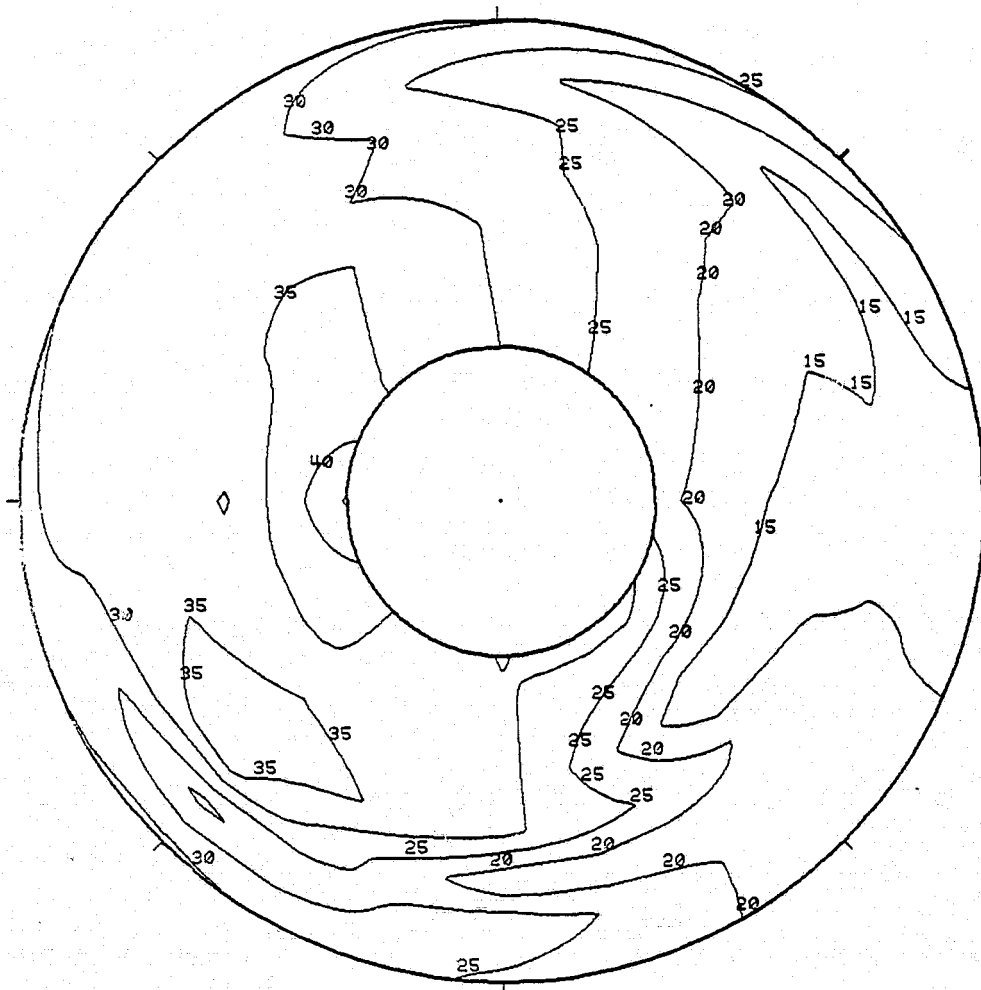
DELTA3
10.6

BYPASS
0.0

WAT2
70.2%

CIVV
-25.0

17 (n) Turbulence Contour 3070 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02546

FIGURE G-17 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 70.2 %

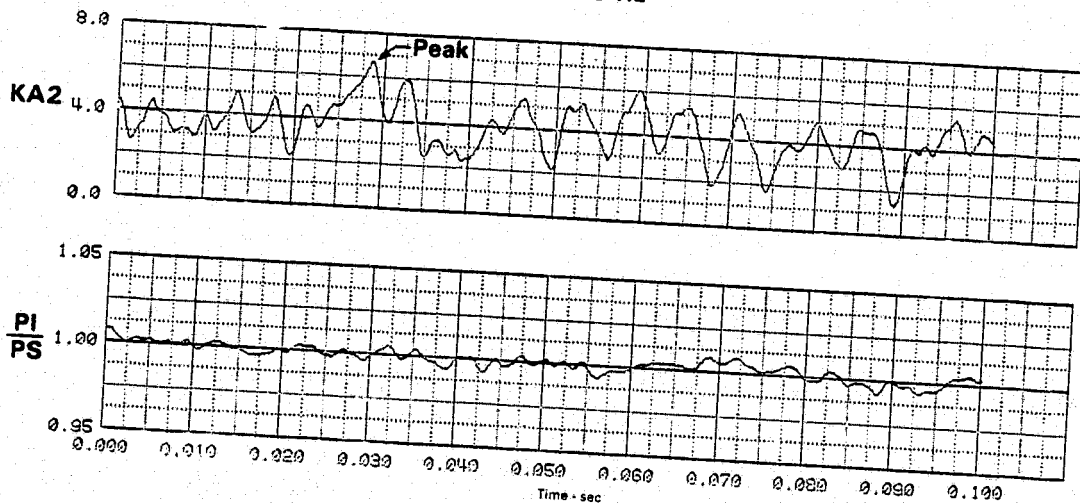
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 7 IDENT. 17
THE SEGMENT START TIME WAS AT 30:10:57.045

MOCH 9.9	ALPHA -10	BETA 10	PHO -3.9	DELTA2 10.6	BYPASS 0.9	WAT2 70.2%	CIVV -25.0
DI 44.22 (6.414)	PI/PS 0.993	KTHETA 0.639	KRA2 0.423	BKRA2 5.013	KQ2 0.932	KQ2 0.672	KQSP 0.302
							D2 0.142

17(o) Time History Plots
275 Hz



PEAK AT TIME = 0.028545 SECONDS

FIGURE G-17 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 70.2\%$

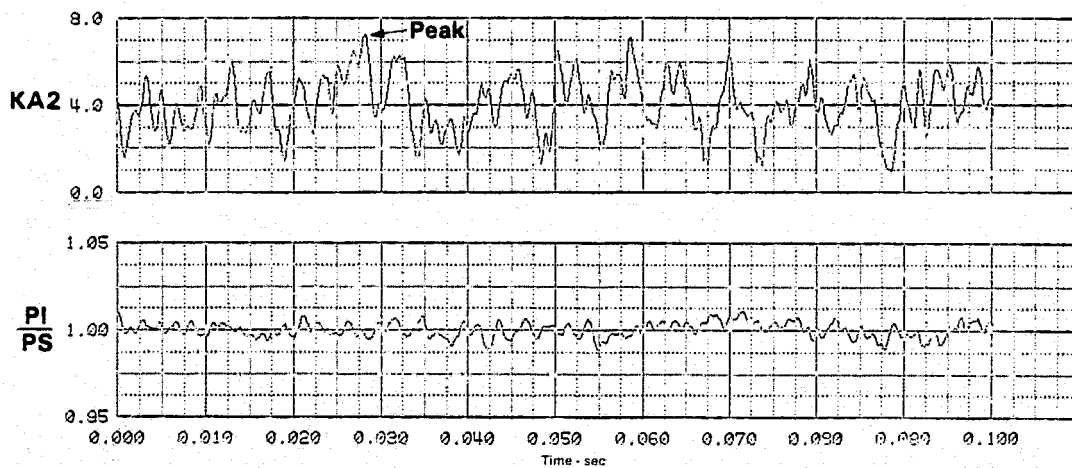
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 7 IDENT. 17
THE SEGMENT START TIME WAS AT 20:10:57.045

MACH 0.9	ALPHA -10	BETA 10	SW2 -27.0	DELTA2 15.8	SVF233 7.3	WAT2 70.2%	Q1WV -15.0
PI 44.12 (6.399)	PI/PS 0.998	KTHETA 0.888	KR22 9.468	SR22 8.85	K22 7.975	K22 2.998	K22 0.155

17(p)Time History Plots
615 Hz



PEAK AT TIME = 0.02215 SECONDS

FIGURE G-17 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 70.2%

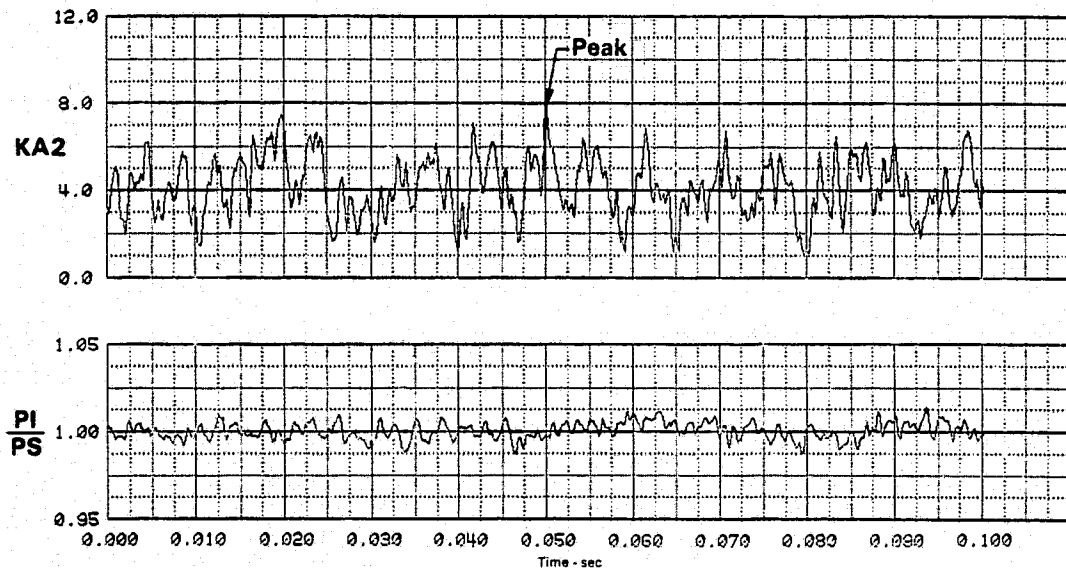
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 7 IDENT. 17
THE SEGMENT START TIME WAS AT 20:10:57.053

MACH 0.9	ALPHA -10	BETA 10	PHI -3.3	DELTA3 10.8	BYPASS 0.0	WAT2 70.2%	CIWV -25.0
PI 44.20 (6.411)	PI/PS 0.933	KTHETA 0.279	KPA2 0.512	EKPA2 7.196	KP2 2.275	K02 0.927	K03P 1.051
							D2 0.127

17(q)Time History Plots 1040 Hz



PEAK AT TIME = 0.049995 SECONDS

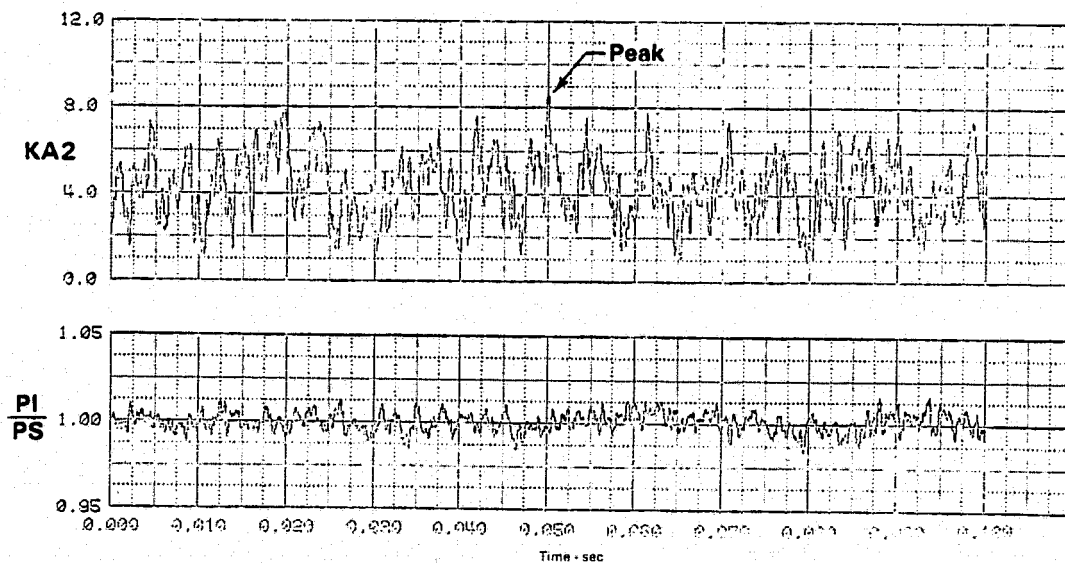
FIGURE G-17 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 70.2%

SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 7 IDENT. 17
THE SEGMENT START TIME WAS AT 20:10:57.033

MACH 0.9	ALPHA -10	BETA 10	RHO -3.0	DELTA3 13.6	BYPASS 0.0	WAT2 70.2%	CIVV -25.0
P1 44.20 (6.410)	PI/PS 0.692	KTHETA 0.929	KR22 0.563	EKR22 8.422	K2 9.351	K2 1.107	K2SP 1.141
							D2 0.215

17 (r) Time History Plots 3070 Hz



PEAK AT TIME = 0.049995 SECONDS

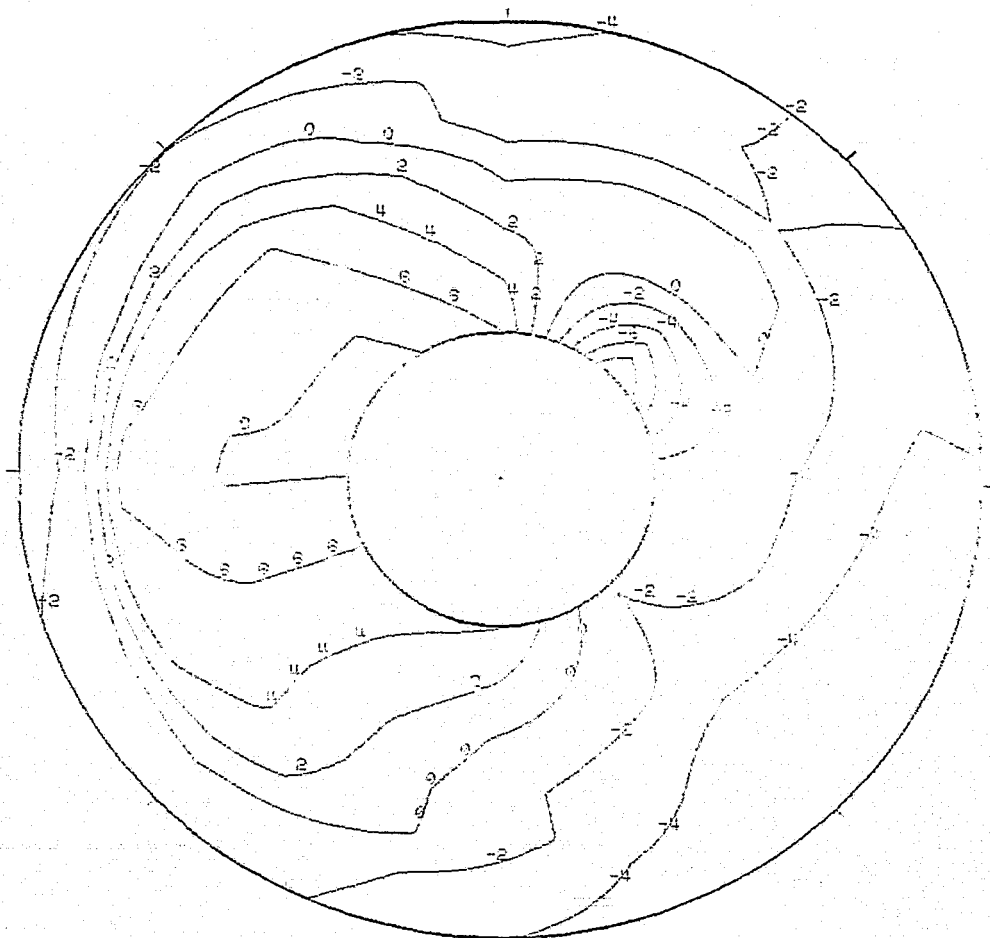
FIGURE G-17 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 70.2\%$

SERIES VII - WSPR DATA STUDY

DATA PART/POINT 157/7 IDENT. 17
THE SEGMENT START TIME WAS 27 20.110157.015

MACH 0.9	ALPHA -10	BETA 10	WAT2 70.2	DEL TAB 10.6	BYPASS 0.0	WOT2 70.2%	CIWV -25.0
PI 44.22 (6.414)	PI/PS 2.933	KTHETA 0.699	KPA2 0.423	BKPA2 8.013	KD2 6.699	KCE 0.672	KOSP 0.992
							D2 0.142

17(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 275 Hz



MEAN FACE PRESSURE = 44.22 kPa (6.414 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.028545 SECONDS

FIGURE G-17 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 70.2 %

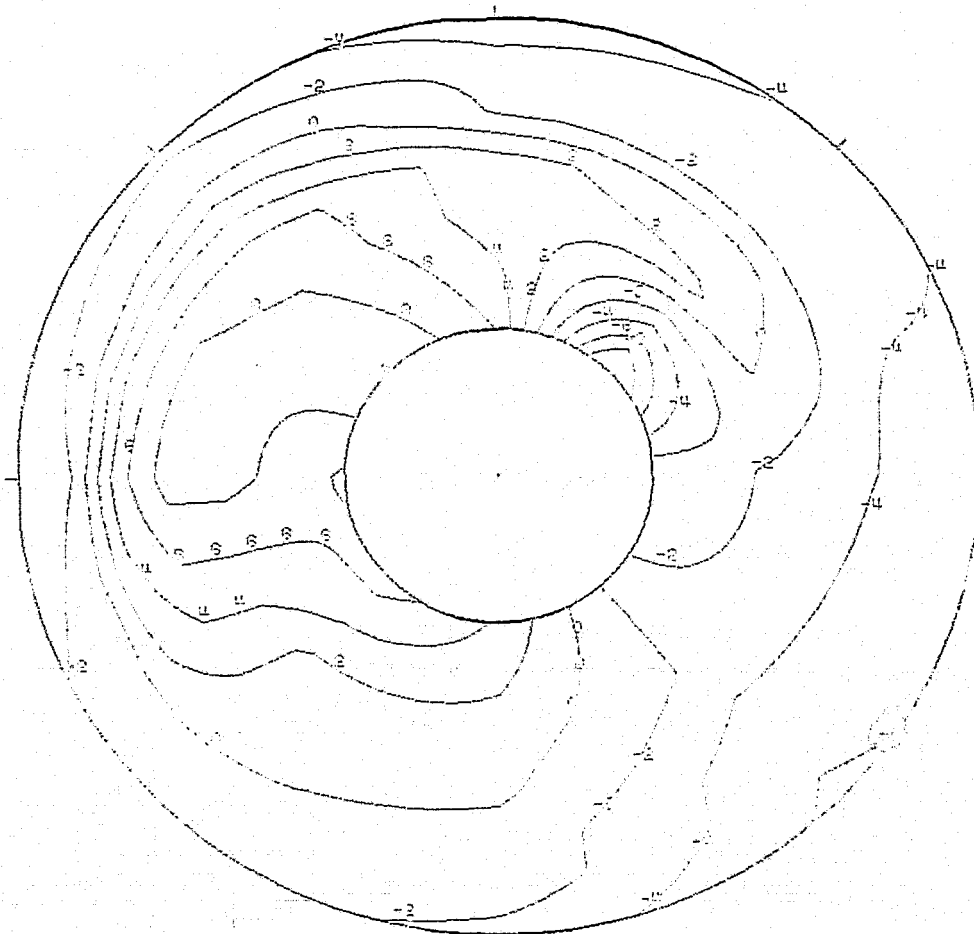
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 7 IDENT. 17
THE SEGMENT START TIME WAS AT 29:10:57.045

MACH 1.3	ALPHA -10	BETA 10	BWO -3.0	DELTA2 10.6	BYPASS 0.2	WAT2 70.2%	Q1VV -15.9
PT 44.12 (6.399)	PI/P2 0.993	KTHETA 0.690	KPA2 0.459	BP223 5.55	KC2 7.245	KC3 0.639	KOSP 0.942
							D2 0.155

17(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 615 Hz



MEAN FACE PRESSURE = 44.12 kPa (6.399 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.028215 SECONDS

FIGURE G-17 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 70.2\%$

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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 7 IDENT. 17
THE SEGMENT START TIME WAS AT 20:10:57.053

MACH
0.9

ALPHA
-10

BETA
10

PHI
-3.9

DELTA3
10.6

BYPASS
0.0

WAT2
70.2%

CIVV
-35.9

P1
44.20 (6.411)

P1/P3
0.948

KTHETA
0.379

KPA2
0.512

BKPA2
7.136

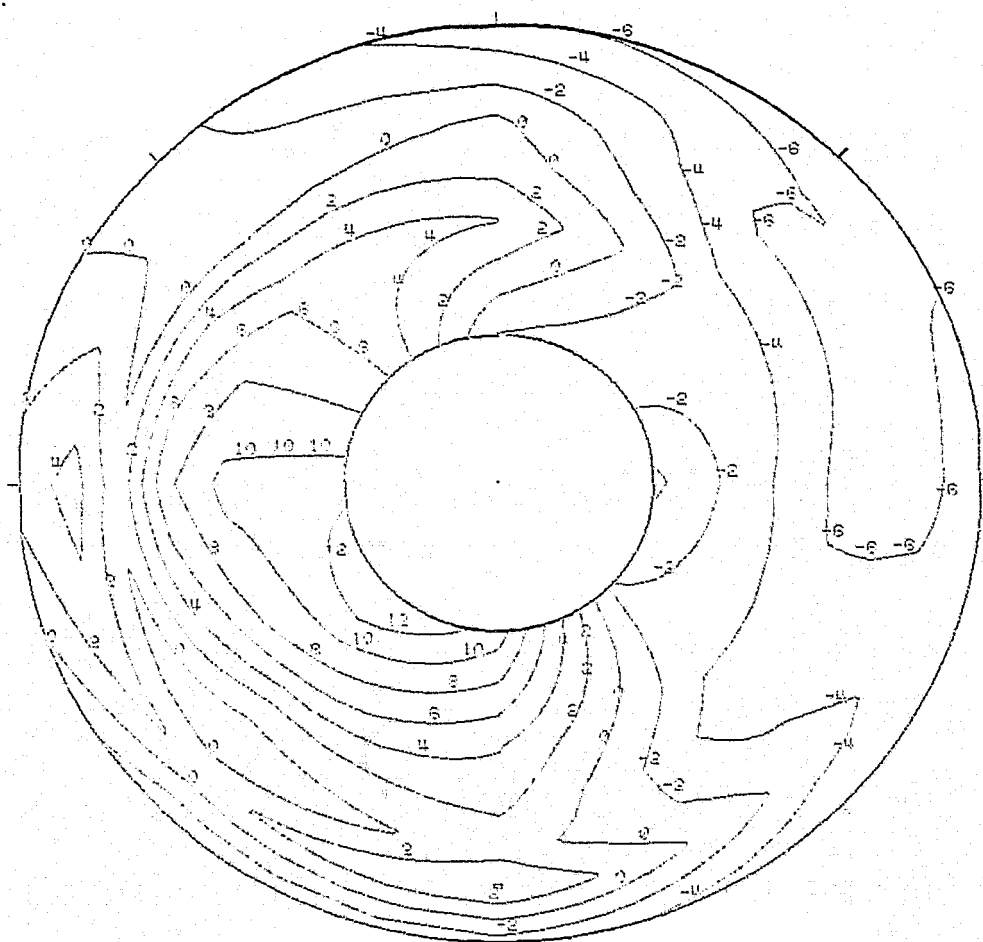
KAP
2.975

KQ2
0.937

KOSP
1.051

D2
0.197

17(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 1040 Hz



MEAN FACE PRESSURE = 44.20 kPa (6.411 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.049995 SECONDS

FIGURE G-17 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 70.2\%$

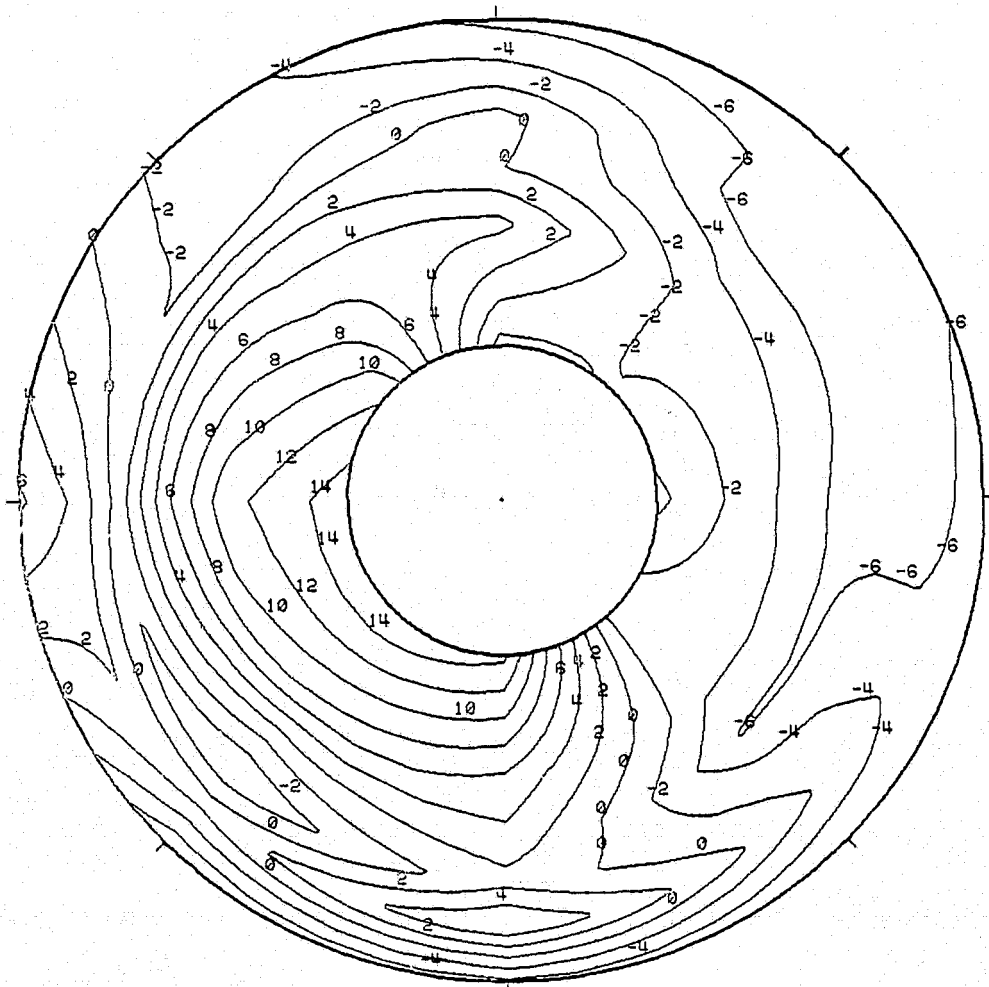
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 7 IDENT. 17
THE SEGMENT START TIME WAS AT 20:10:57.053

MACH 0.9	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 70.2%	CIVV -25.0
P1 44.20 (6.410)	PI/PS 0.992	KTHETA 0.929	KRA2 0.599	BKRA2 0.422	KA2 9.351	KC2 1.107	KOSP 1.141
							D2 0.215

**17(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
3070 Hz**



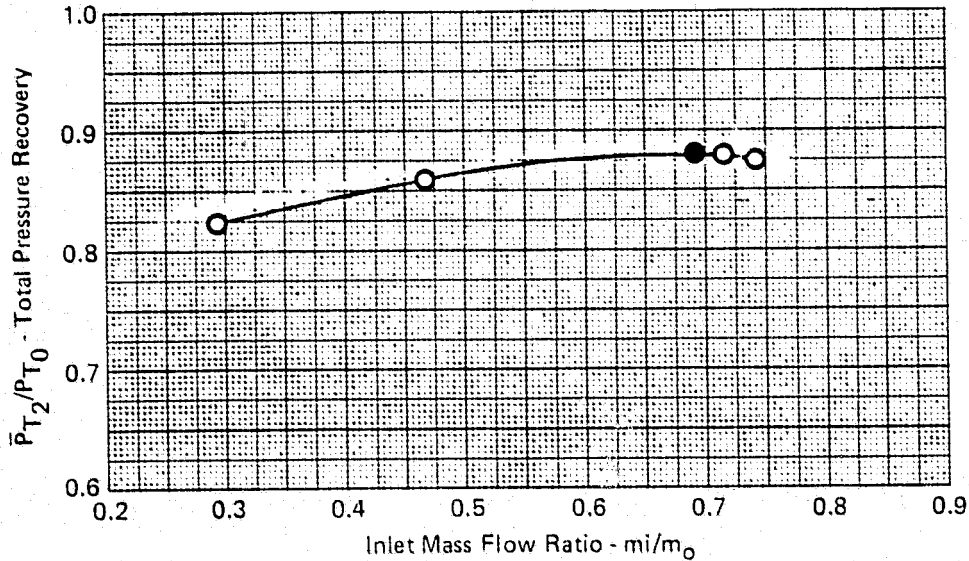
MEAN FACE PRESSURE = 44.20 kPa (6.410 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.049995 SECONDS

**FIGURE G-17 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 70.2 %**

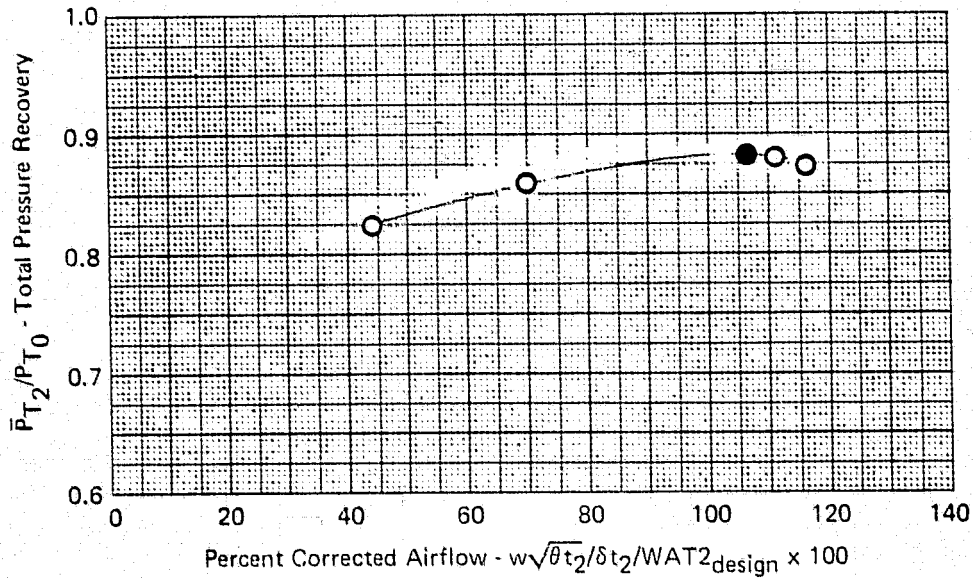
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SERIES VII - NASA Data Study
 Part/Point - 157/5, Ident 18
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -5.00

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



(b) Total Pressure Recovery vs Percent Corrected Airflow



GP77-0658-1

FIGURE G-18
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = -10, \beta = 10, WAT2 = 106.3\%$

SERIES VII - NASA Data Study
 Part/Point - 157/5, Ident 18
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -5.00

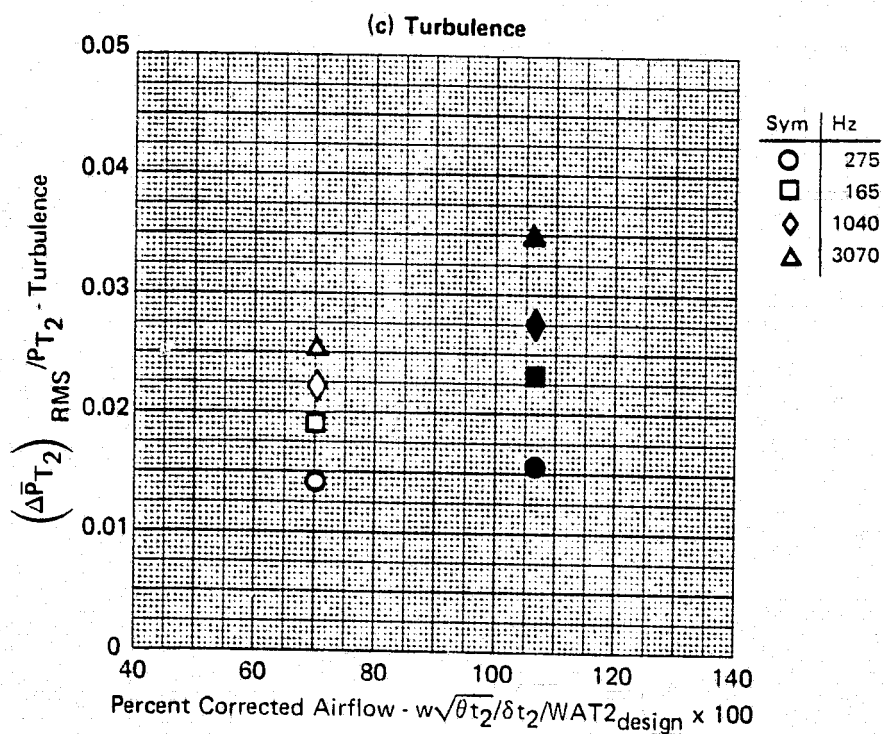
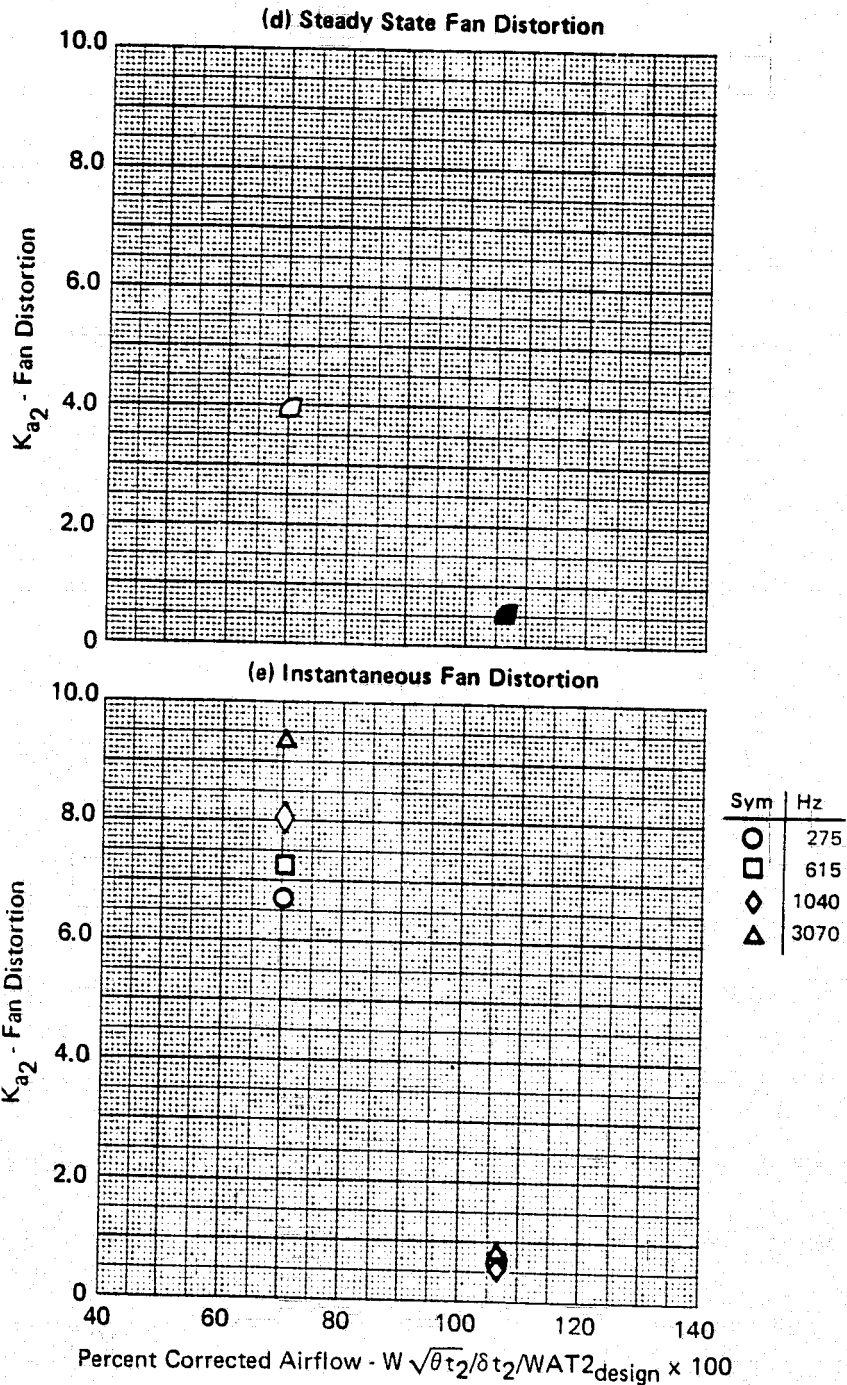


FIGURE G-18 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = -10$, $\beta = 10$, $WAT2 = 106.3\%$

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SERIES VII - NASA Data Study
 Part/Point - 157/5, Ident 18
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -5.00



GP77-0658-3

FIGURE G-18 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = -10$, $\beta = 10$, $WAT2 = 106.3\%$

SERIES VII - NASA Data Study
 Part/Point - 157/5, Ident 18
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -5.00

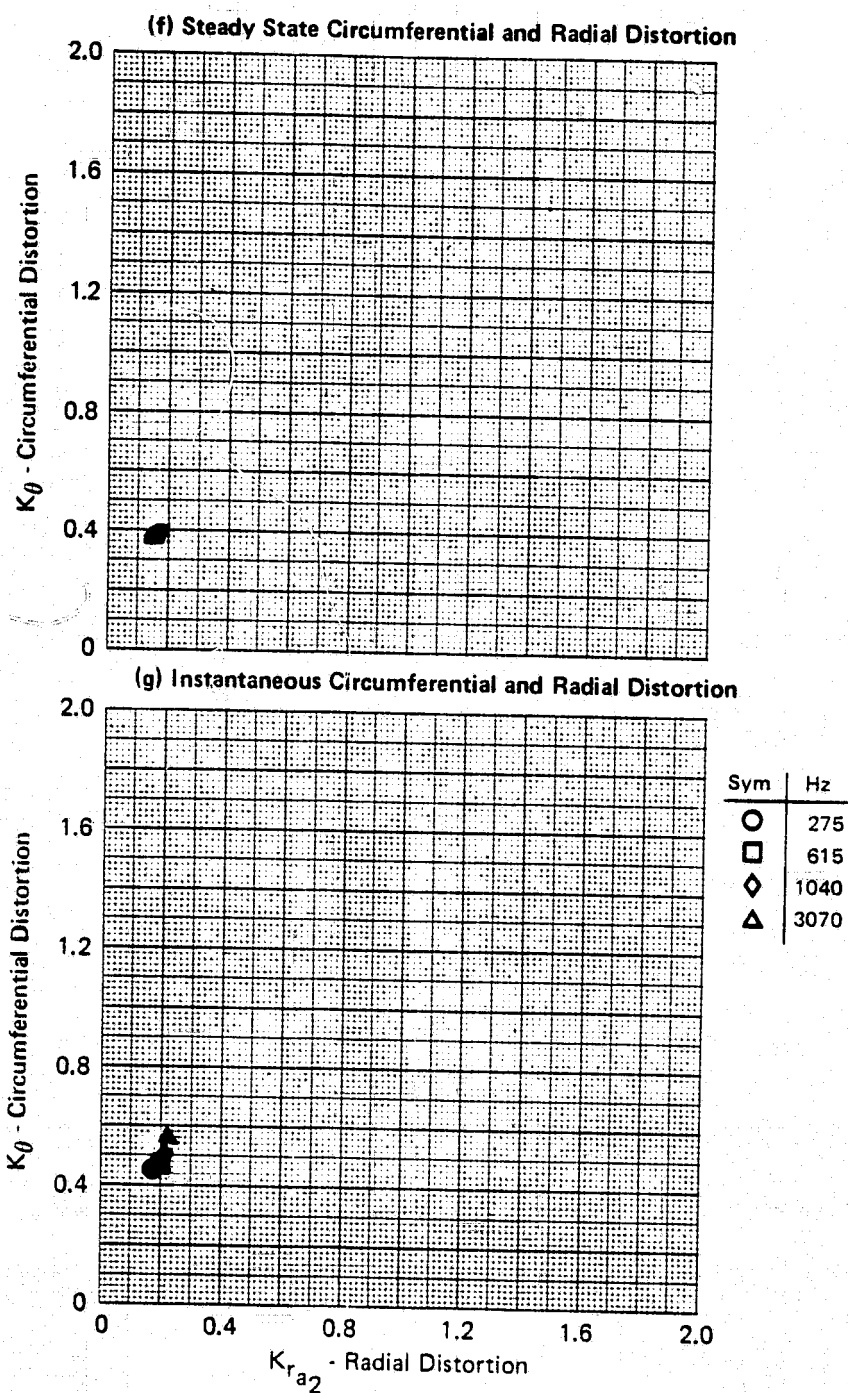
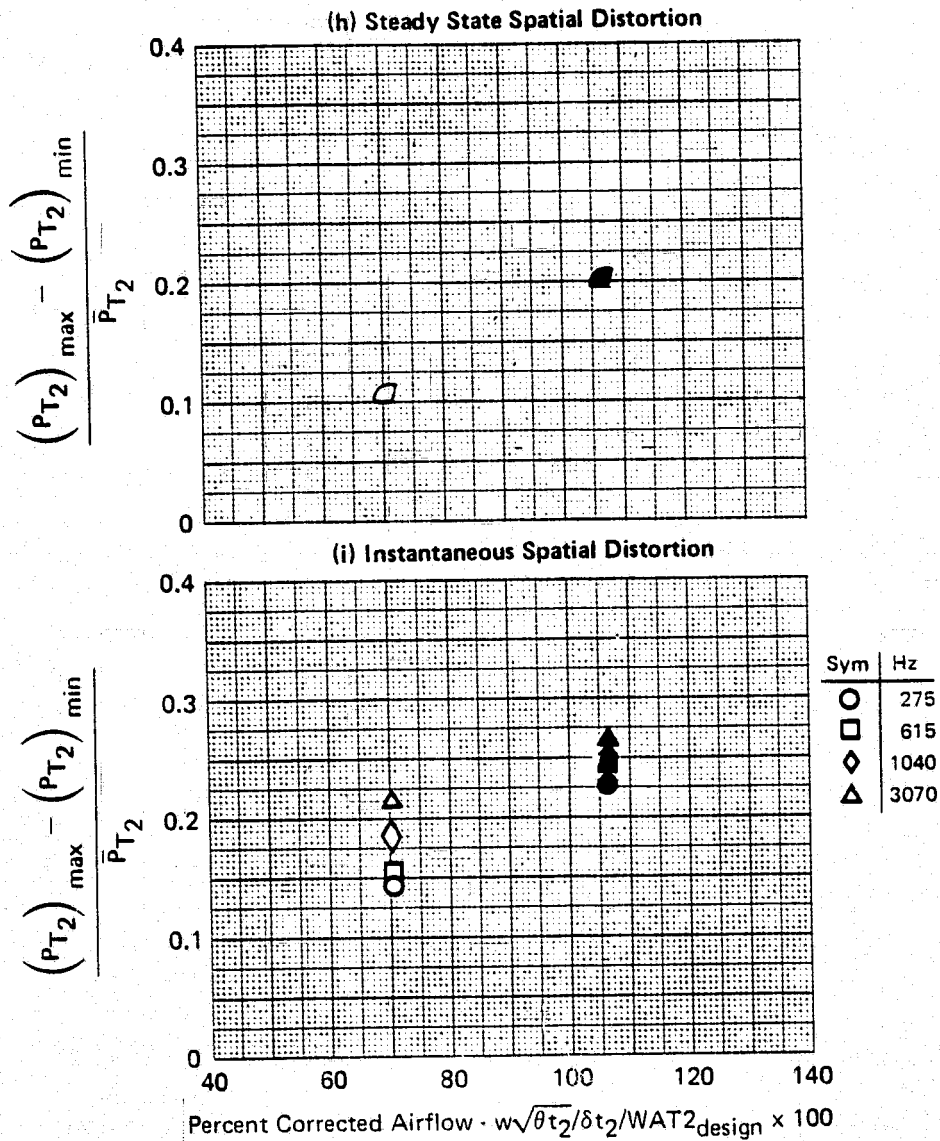


FIGURE G-18 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = -10^\circ$, $\beta = 10^\circ$, WAT2 = 106.3 %

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SERIES VII - NASA Data Study
 Part/Point - 157/5, Ident 18
 RHO DELTA3 BYPASS CIVV
 -3.0 10.6 0.0 -5.00



GP77-0658-4

FIGURE G-18 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = -10$, $\beta = 10$, $WAT2 = 106.3\%$

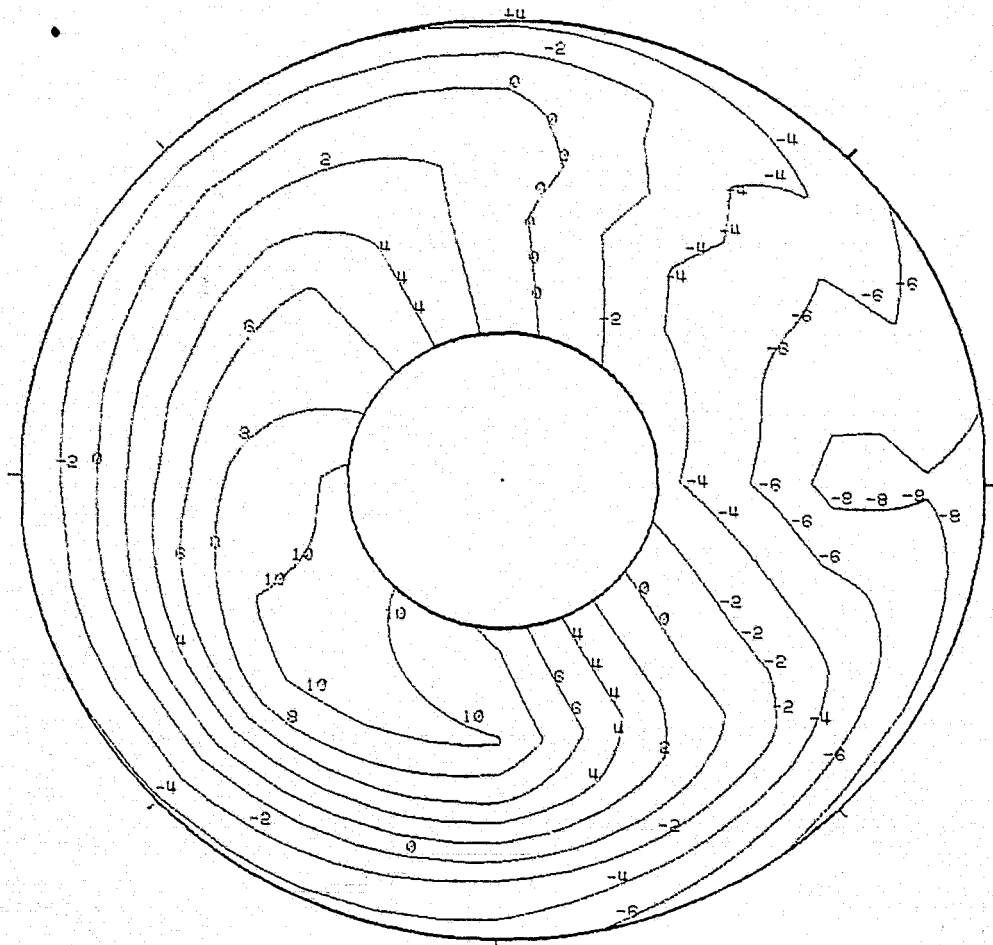
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 5 IDENT. 18
THE SEGMENT START TIME WAS AT 20: 2:47.050

MACH 0.9	ALPHA -10	BETA 10	PHI -3.0	DELTA3 13.6	BYPASS 0.0	WAT2 106.3%	CIVV -5.0
PI 45.26 (6.564)	PI/PS 1.000	KTHETA 0.376	KPA2 0.166	SKPA2 0.156	KP2 0.531	KC2 0.429	KESP 0.472
							D2 0.201

18 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 45.26 kPa (6.564 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

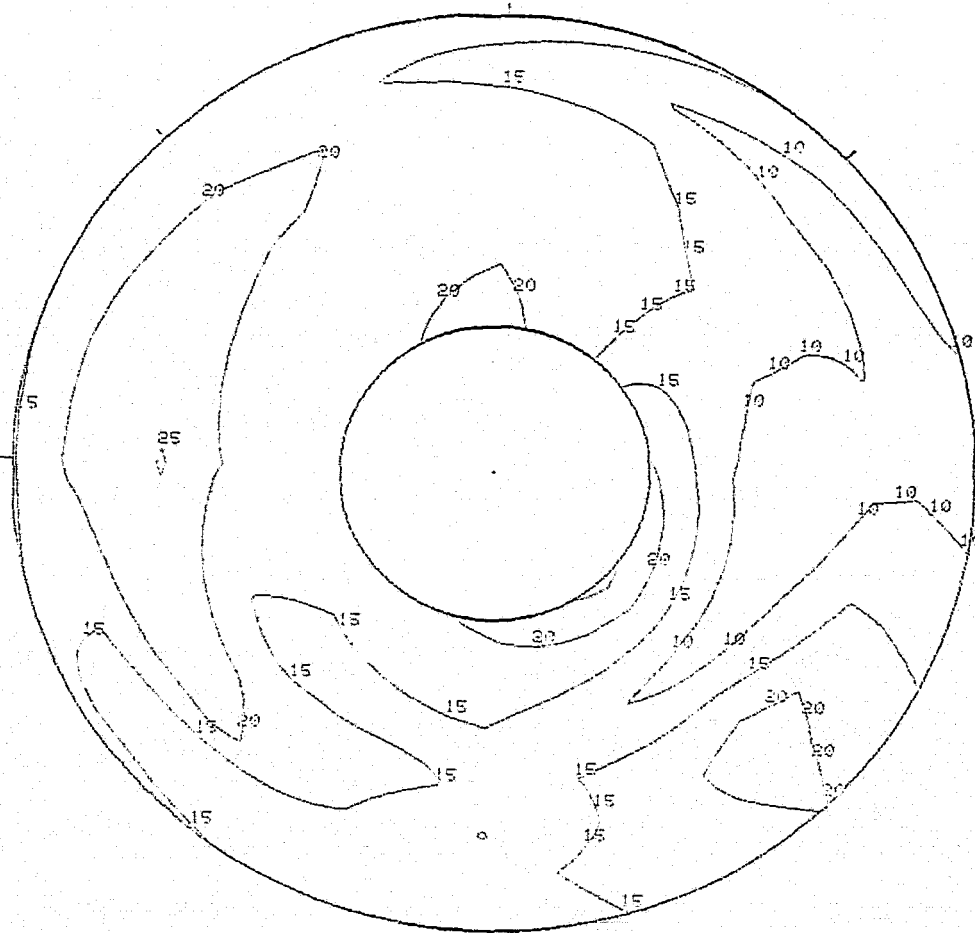
FIGURE G-18 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 106.3 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 5 IDENT. 18
THE SEGMENT START TIME WAS AT 20: 9:47.050

MACH 0.9 ALPHA -10 BETA 10 RHO -5.0 DELTA3 10.6 BYPASS 0.0 WAT2 106.3% CIVV -5.0

18(k) Turbulence Contour 275 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01563

FIGURE G-18 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 106.3\%$

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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157/5 IDENT. 18
THE SEGMENT START TIME WAS AT 20: 3:47.057

MACH
0.9

ALPHA
-10

BETA
10

PHI
-3.9

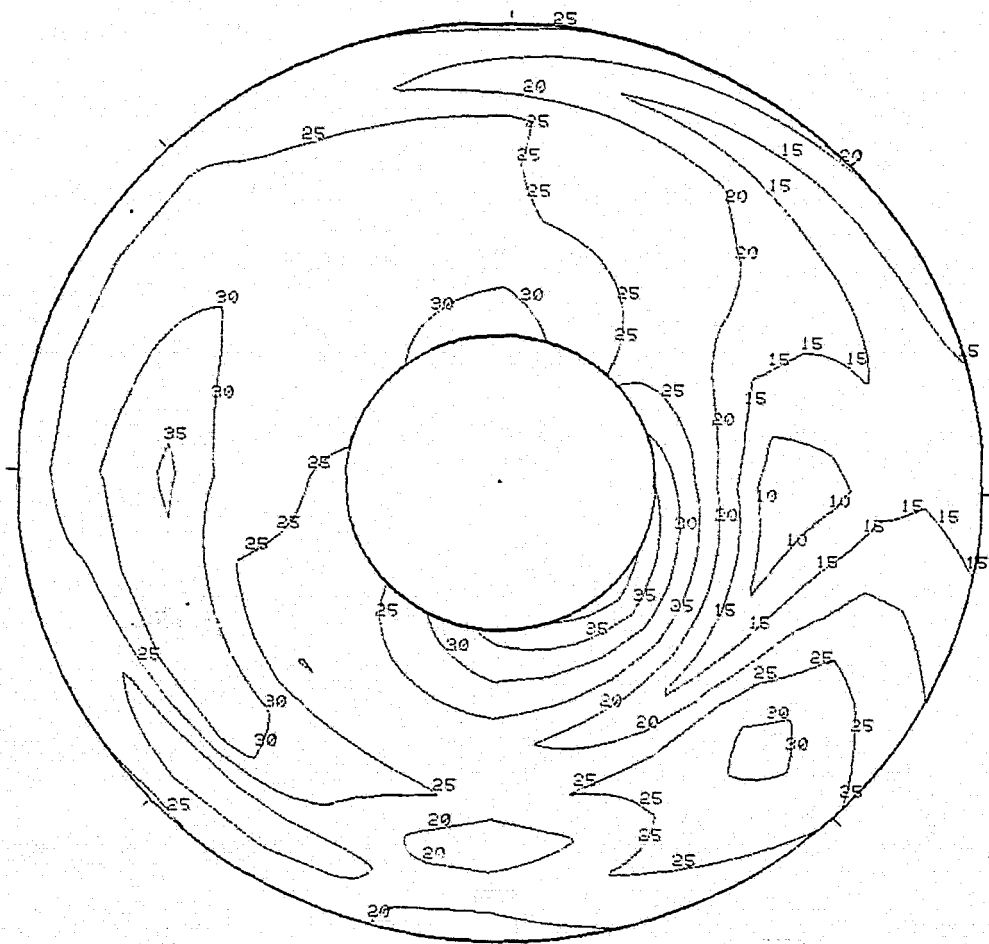
DELTA3
10.6

BYPASS
0.9

WAT2
106.3%

CIVV
-5.0

18 (I) Turbulence Contour 615 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02311

FIGURE G-18 (Continued)

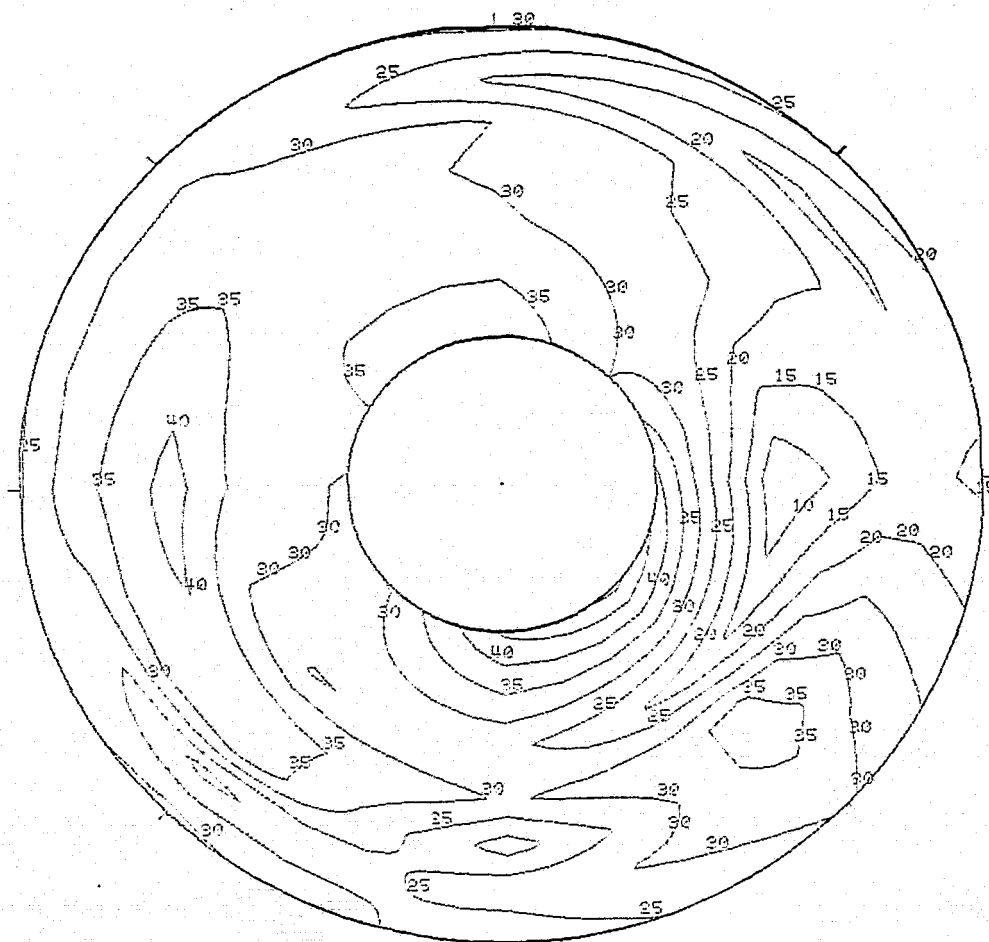
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 106.3\%$

SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 5 IDENT. 18
THE SEGMENT START TIME WAS AT 20: 0:47.053

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
0.9	-10	10	-3.0	10.6	0.0	106.3%	-5.0

18(m) Turbulence Contour 1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02768

FIGURE G-18 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 106.3\%$

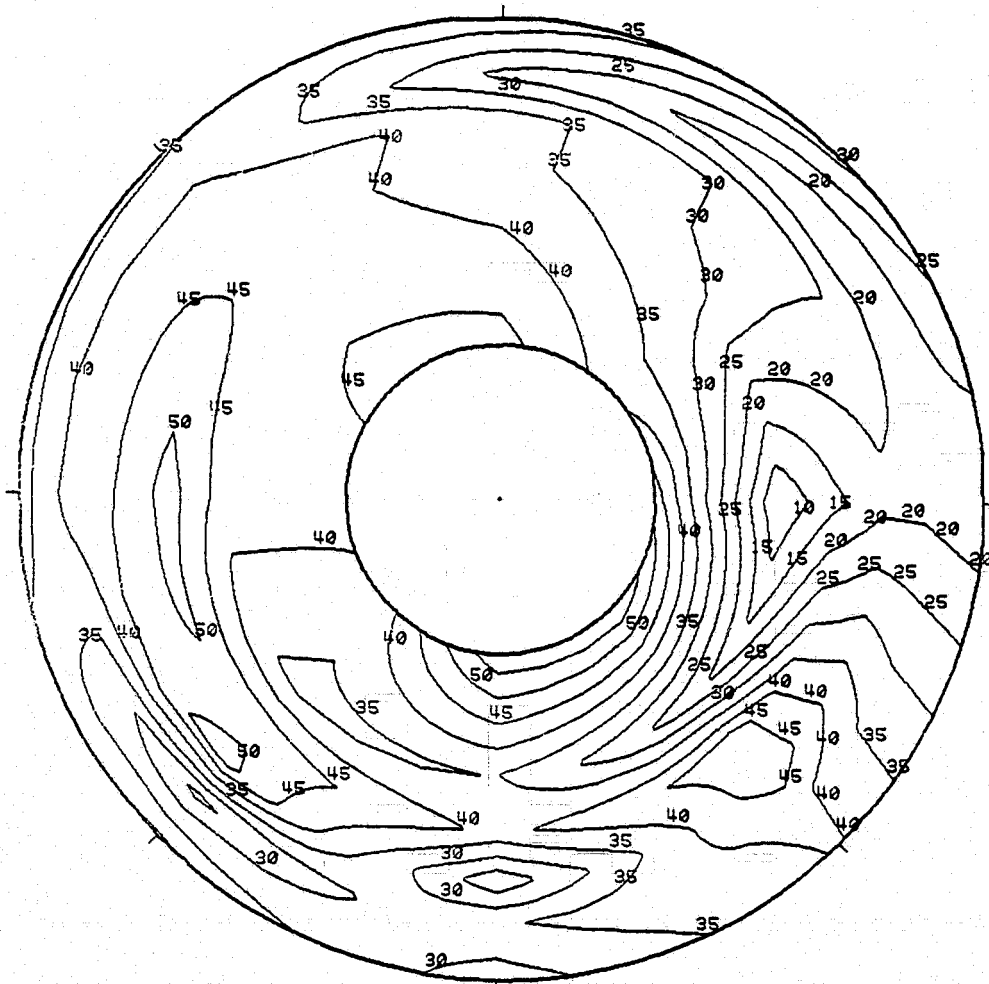
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 5 IDENT. 18
THE SEGMENT START TIME WAS AT 20: 8:47.047

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
0.9	-10	10	-3.0	10.6	0.0	106.3%	-5.0

18 (n) Turbulence Contour 3070 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .03498

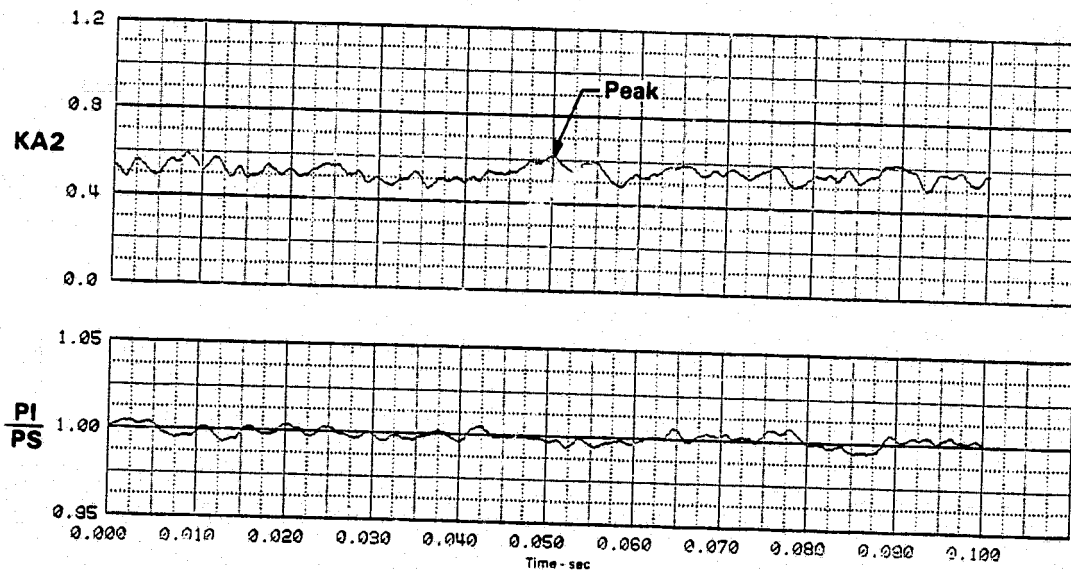
FIGURE G-18 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 106.3\%$

SERIES VII - NASA DATA STUDY

DATA PART/POINT 157/3 IDENT. 18
THE SEGMENT START TIME WAS AT 20: 0:47.050

MACH	ALPHA	BETA	RHO	DEL T03	BYPASS	WAT2	CIVV
0.9	-10	10	-3.0	10.6	0.0	106.3%	-5.0
PI	PI/PS	KTHETA	KPAR	KPAR2	KQ2	KQ3	KQCP
45.13 (0.545)	0.697	0.457	0.170	0.153	0.216	0.092	0.539
							0.227

18(o) Time History Plots
275 Hz



PEAK AT TIME = 0.049995 SECONDS

FIGURE G-18 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 106.3%

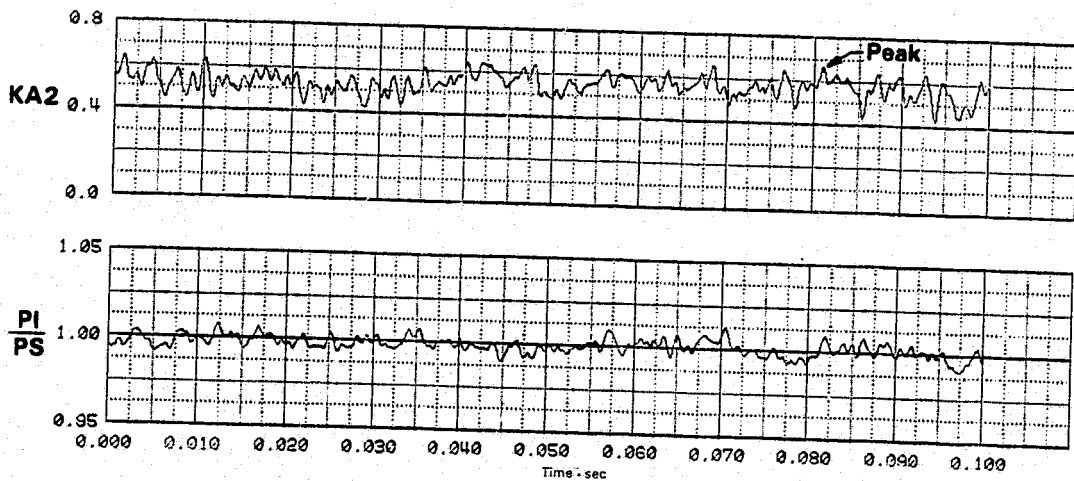
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157/5 IDENT. 18
THE SEGMENT START TIME WAS AT 20: 8:47.057

MACH 0.9	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 106.3%	CIVV -5.0
45.15 (6.549)	PI/PS 0.993	KTHETA 0.493	KRA2 2.192	EKPA2 0.113	KA2 0.883	KO2 0.542	KOCP 0.540
							O2 0.245

18(p) Time History Plots 615 Hz



PEAK AT TIME = 0.081015 SECONDS

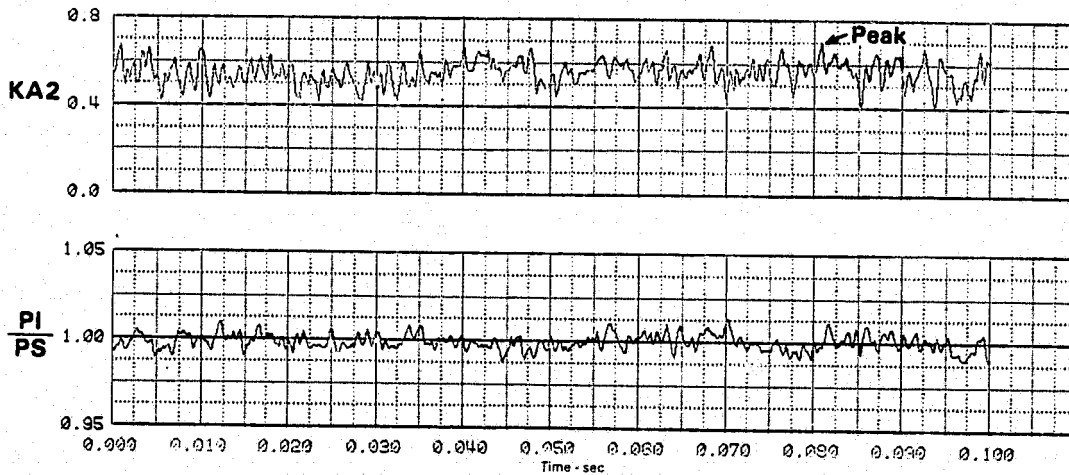
FIGURE G-18 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 106.3%

SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 5 IDENT. 18
THE SEGMENT START TIME WAS AT 20: 3:47.053

MACH 0.9	ALPHA -10	BETA 10	PHI -3.0	DELTA2 10.5	BYPASS 0.0	WAT2 106.3%	CLVY -5.0
OT 45.15 (6.549)	PI/PS 0.990	KTWETA 0.981	KRP2 0.211	EKRP2 0.115	K22 0.333	K02 0.542	MC2P 0.333
							D2 0.249

18(q) Time History Plots 1040 Hz



PEAK AT TIME = 0.080850 SECONDS

FIGURE G-18 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 106.3\%$

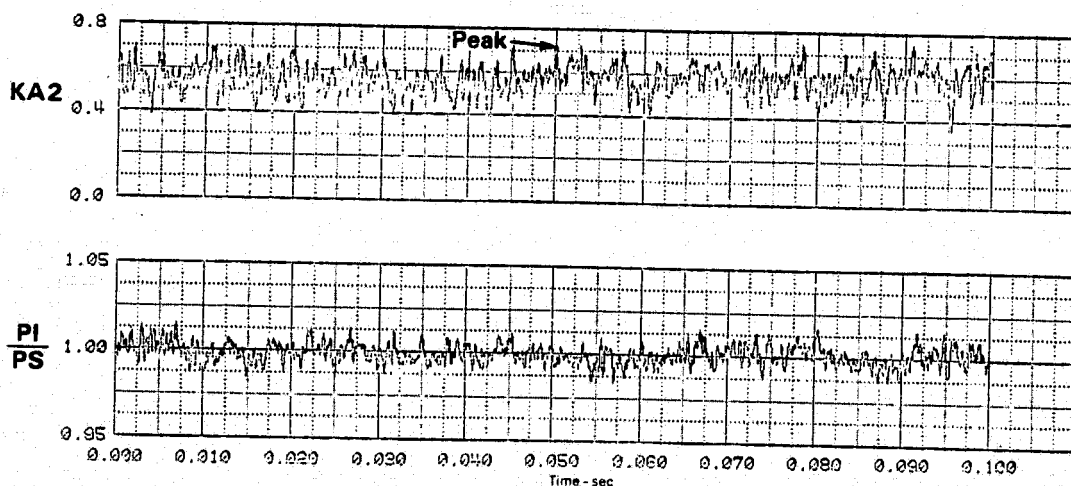
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 5 IDENT. 18
THE SEGMENT START TIME WAS AT 20: 8:47.047

MACH 0.9	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 106.3%	CIVV -5.0
PI 45.60 (6.614)	PI/PS 1.033	KTHETA 0.563	KRA2 0.213	BKRA2 0.204	KQ2 0.763	KQ2 0.563	KQ3P 0.663
							O2 0.265

18(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.049995 SECONDS

FIGURE G-18 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 106.3%

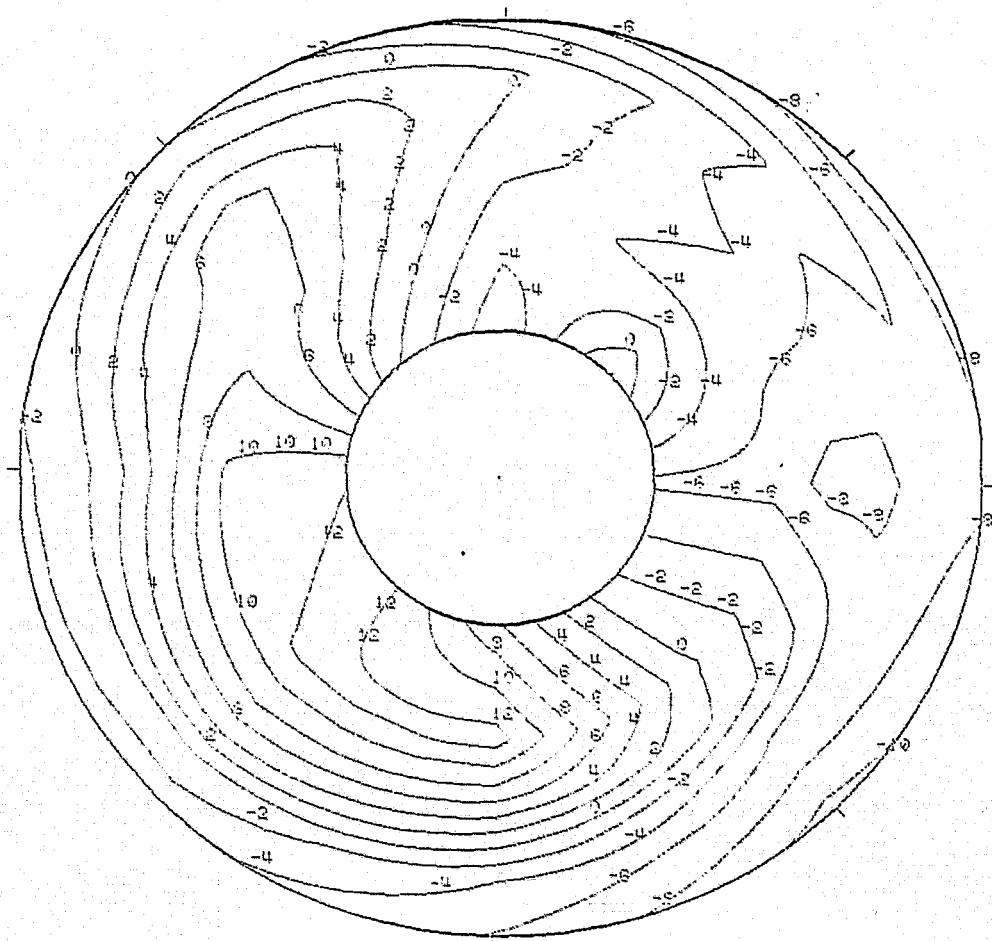
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 5 IDENT. 18
THE SEGMENT START TIME WAS AT 27: 8:47.050

MACH 0.9	ALPHA -10	BETA 10	PL0 -2.0	DELTA2 10.6	BYPASS 0.0	WAT2 106.3%	CIVV -5.0
PI 45.13 (6.545)	PI/PS 0.997	KTHETA 0.457	KPA2 0.177	SKPA2 0.169	KAP2 0.616	KCS 0.450	KOSP 0.538
							D2 0.227

18(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 275 Hz



MEAN FACE PRESSURE = 45.13 kPa (6.545 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.049995 SECONDS

FIGURE G-18 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 106.3\%$

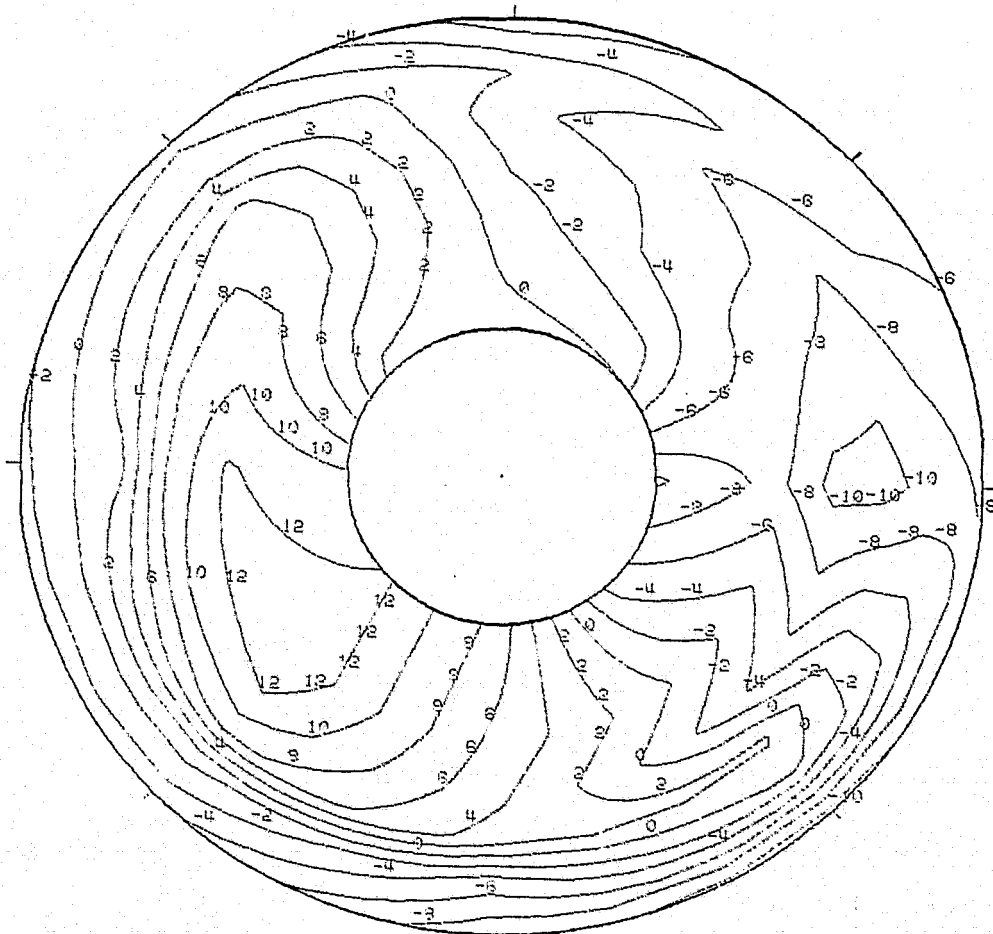
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 5 IDENT. 18
THE SEGMENT START TIME WAS AT 20: 8:47.057

MACH 0.9	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.8	BYPASS 0.13	WAT2 106.3%	CIVV -5.0
PI 45.15 (6.549)	PI/PS 0.033	KTHETA 0.433	KRA2 0.192	BKRA2 0.191	KQ2 0.863	KC2 0.542	KOSP 0.530
							D2 0.245

**18(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
615 Hz**



MEAN FACE PRESSURE = 45.15 kPa (6.549 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.081015 SECONDS

FIGURE G-18 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 106.3\%$

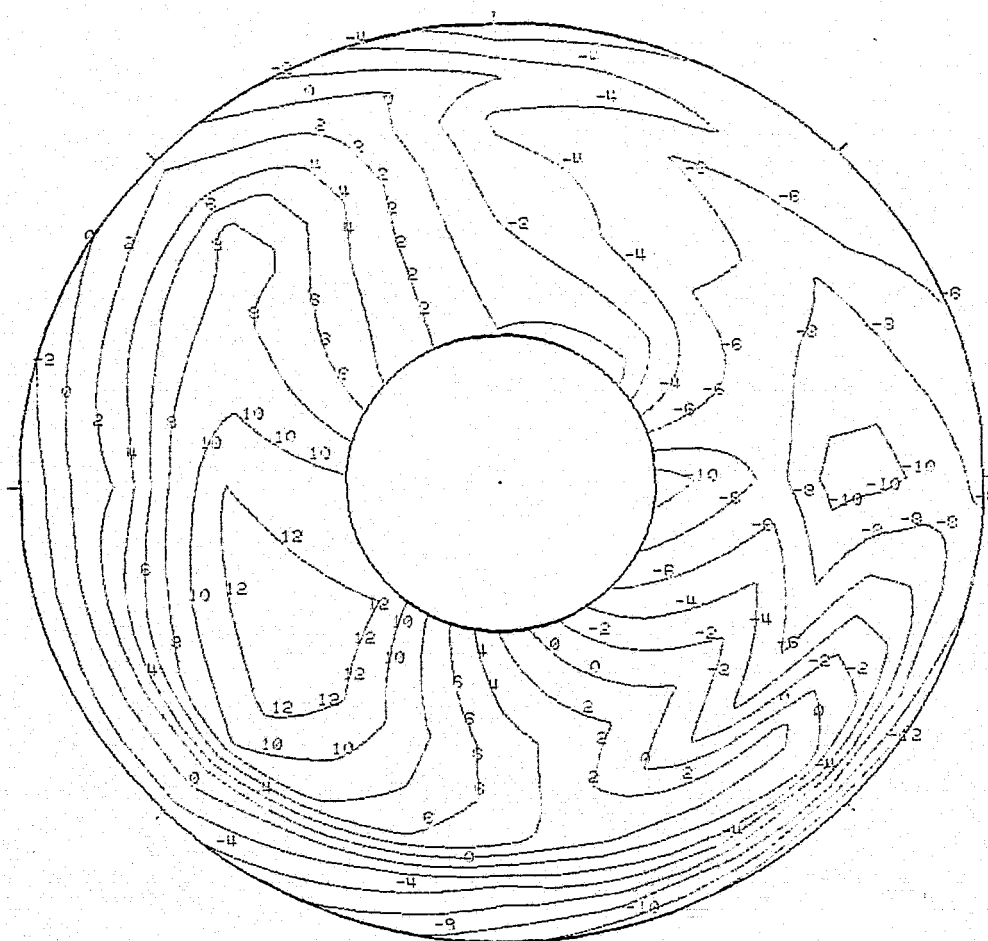
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SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 5 IDENT. 18
THE SEGMENT START TIME WAS AT 20: 3:47.053

MACH 0.9	ALPHA -10	BETA 10	WAT2 106.3	DEL T02 15.1	EXFAS2 0.0	WAT2 106.3%	CIVV -6.0
P1 45.15 (6.549)	P1/P2 0.993	KTHETA 0.501	KRA2 0.211	BKPA2 0.141	KRA2 0.659	KC2 0.542	KC2P 0.559
							D2 0.242

18(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 1040 Hz.



MEAN FACE PRESSURE = 45.15 kPa (6.549 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.080850 SECONDS

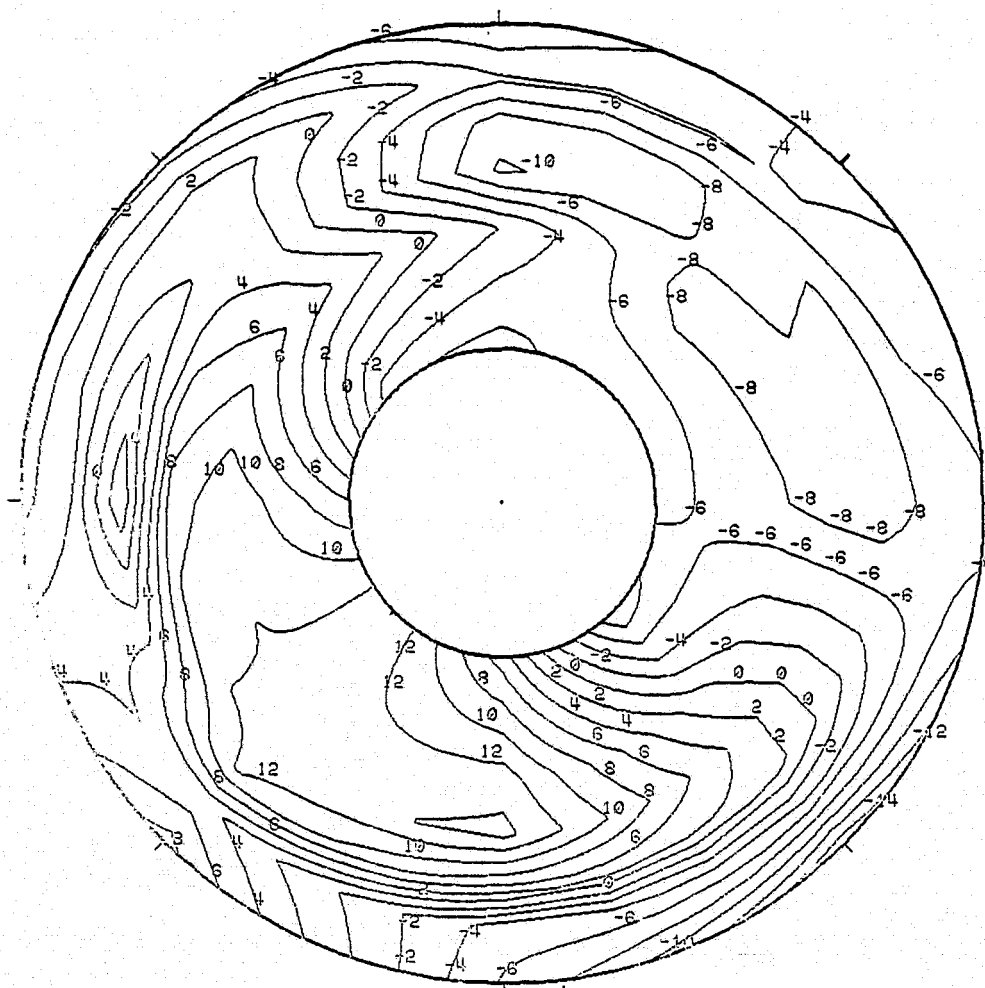
FIGURE G-18 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, $WAT2 = 106.3\%$

SERIES VII - NASA DATA STUDY

DATA PART/POINT 157 / 5 IDENT. 18
THE SEGMENT START TIME WAS AT 20: 8:47.047

MACH 0.9	ALPHA -10	BETA 10	RHO -3.0	DELTA3 10.6	BYPASS 0.0	WAT2 106.3%	CIVV -5.0
PI 45.60 (6.614)	PI/PS 1.008	KTHETA 0.563	KRA2 0.218	BKRA2 0.204	KA2 0.768	KC2 0.563	KOSP 0.663
							D2 0.265

18(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 3070 Hz



MEAN FACE PRESSURE = 45.60 kPa (6.614 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.049995 SECONDS

FIGURE G-18 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -10.0$, $\beta = 10.0$, WAT2 = 106.3 %

FLIGHT - NASA Data Study
 Part/Point - 421/14, Ident - 19
 RHO DELTA3 BYPASS CIVV
 1.0 10.5 0.0 -5.00

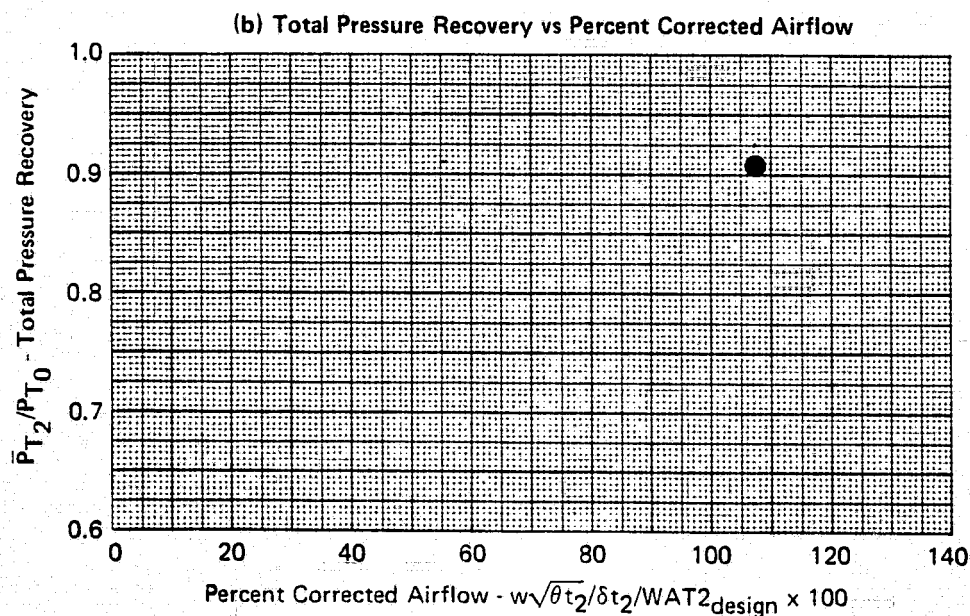
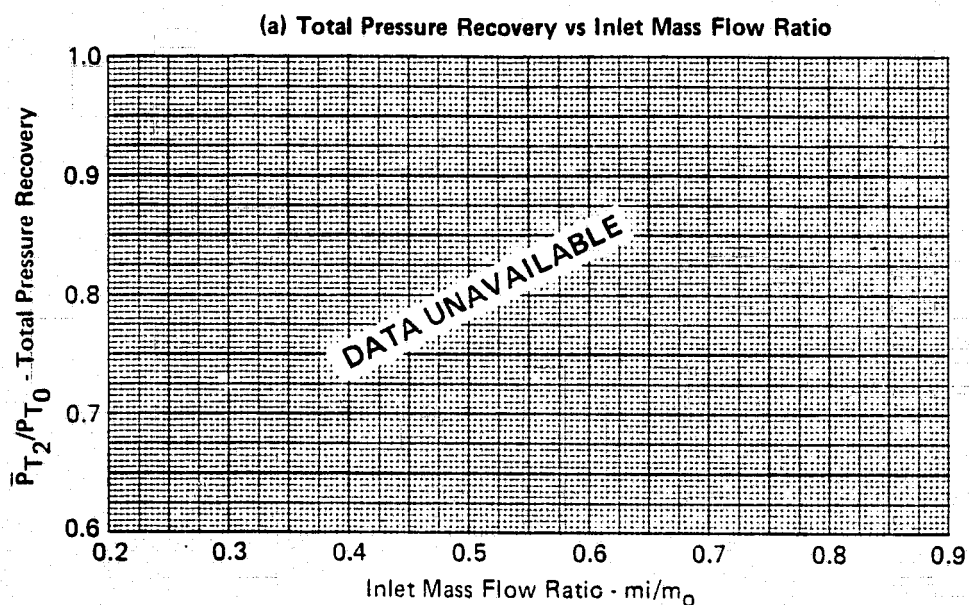
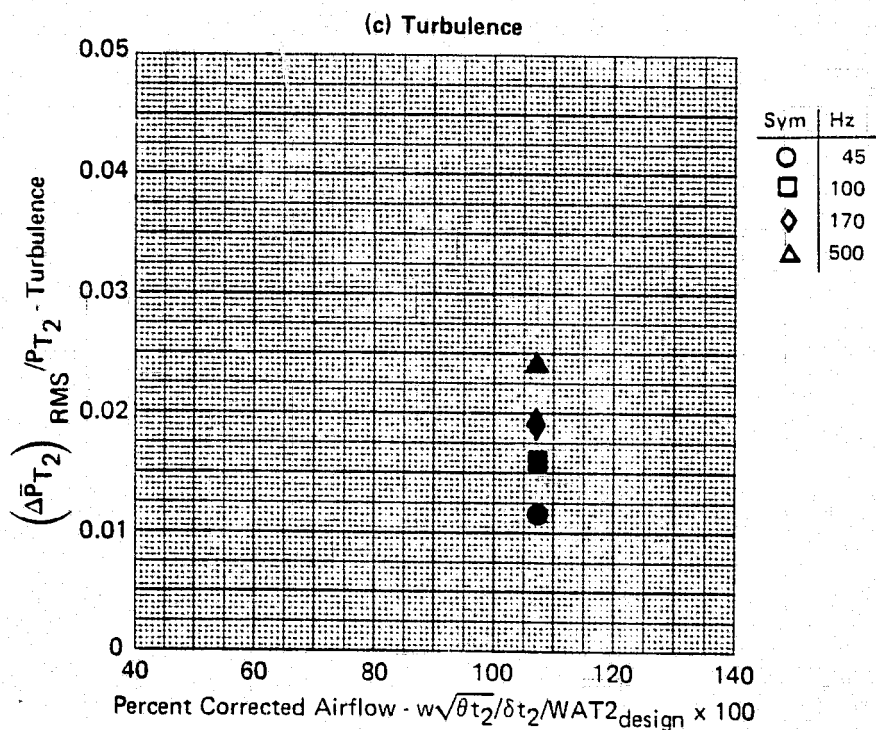


FIGURE G-19
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.94, \alpha = -8.9, \beta = 10.2, WAT2 = 107.1\%$

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FLIGHT - NASA Data Study
 Part/Point - 421/14, Ident 19
 RHO DELTA3 BYPASS CIVV
 1.0 10.5 0.0 -5.00



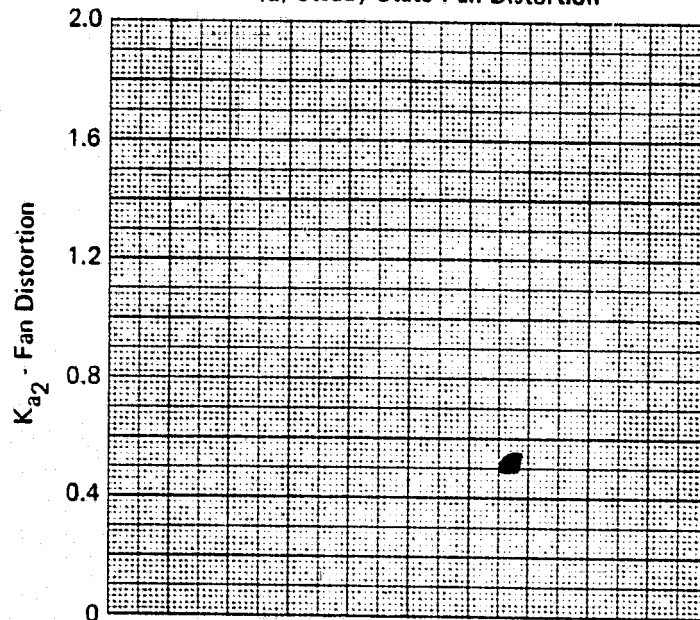
GP77-0658-5

FIGURE G-19 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

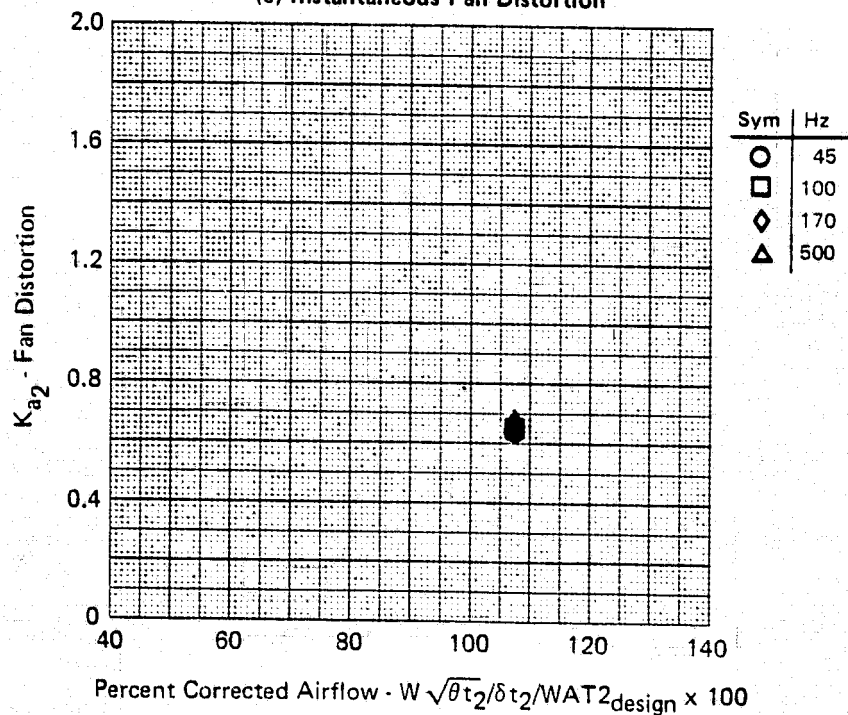
FLIGHT - NASA Data Study
Part/Point - 421/14, Ident 19

RHO DELTA3 BYPASS CIVV
1.0 10.5 0.0 -5.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion

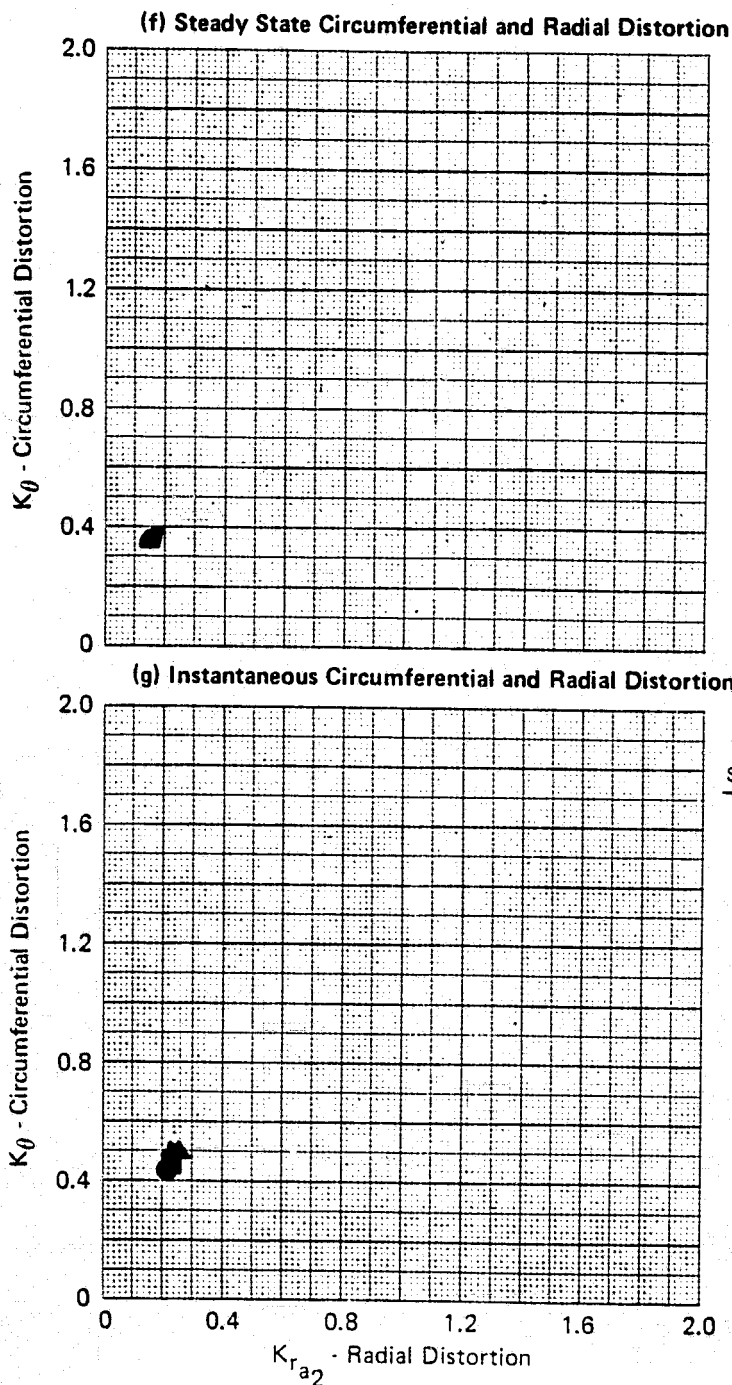


GP77-0658-3

FIGURE G-19 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

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FLIGHT - NASA Data Study
 Part/Point - 421/14, Ident 19
 RHO DELTA3 BYPASS CIVV
 1.0 10.5 0.0 -5.00

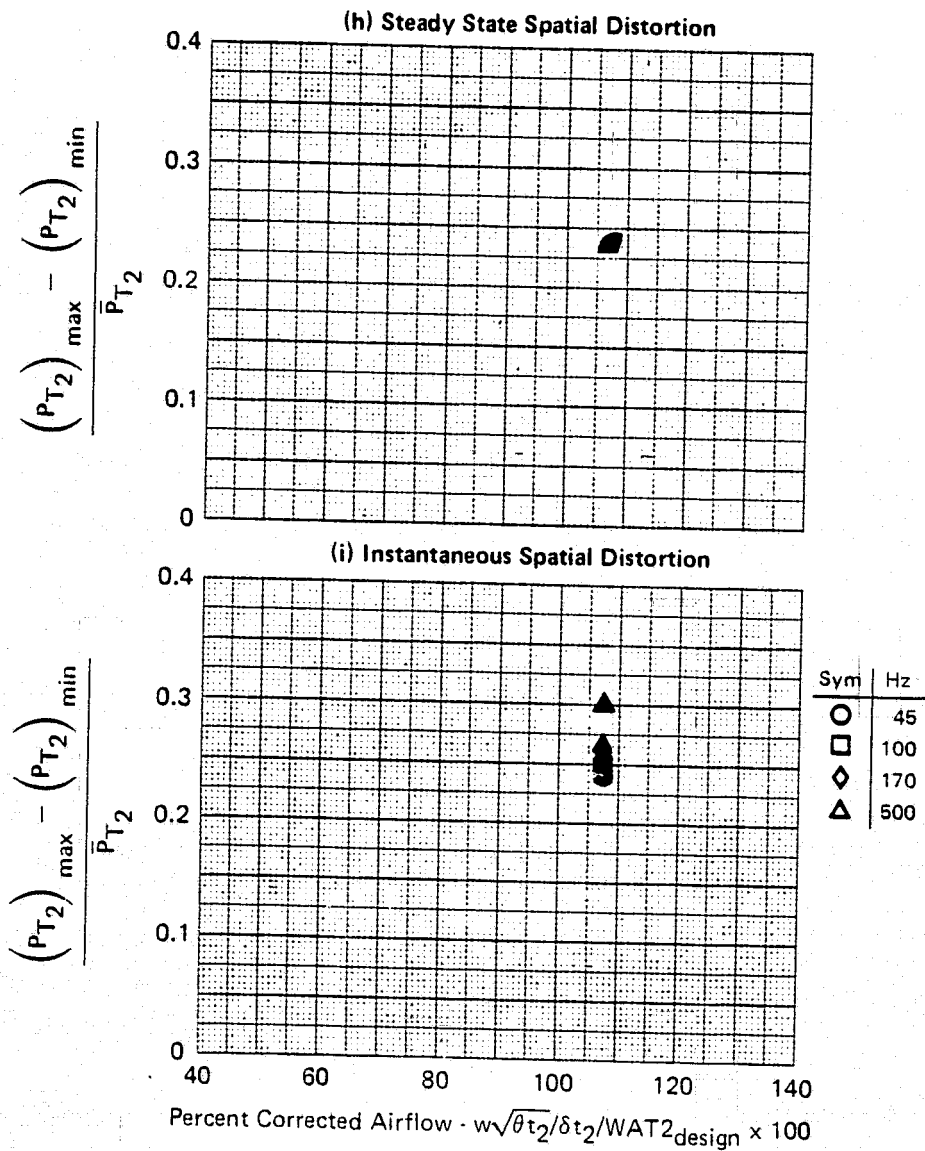


GP77-0658-2

FIGURE G-19 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

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FLIGHT - NASA Data Study
 Part/Point - 421/14, Ident 19
 RHO DELTA3 BYPASS CIVV
 1.0 10.5 0.0 -5.00



GP77-0658-4

FIGURE G-19 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.94, \alpha = -8.9, \beta = 10.2, WAT2 = 107.1 \%$

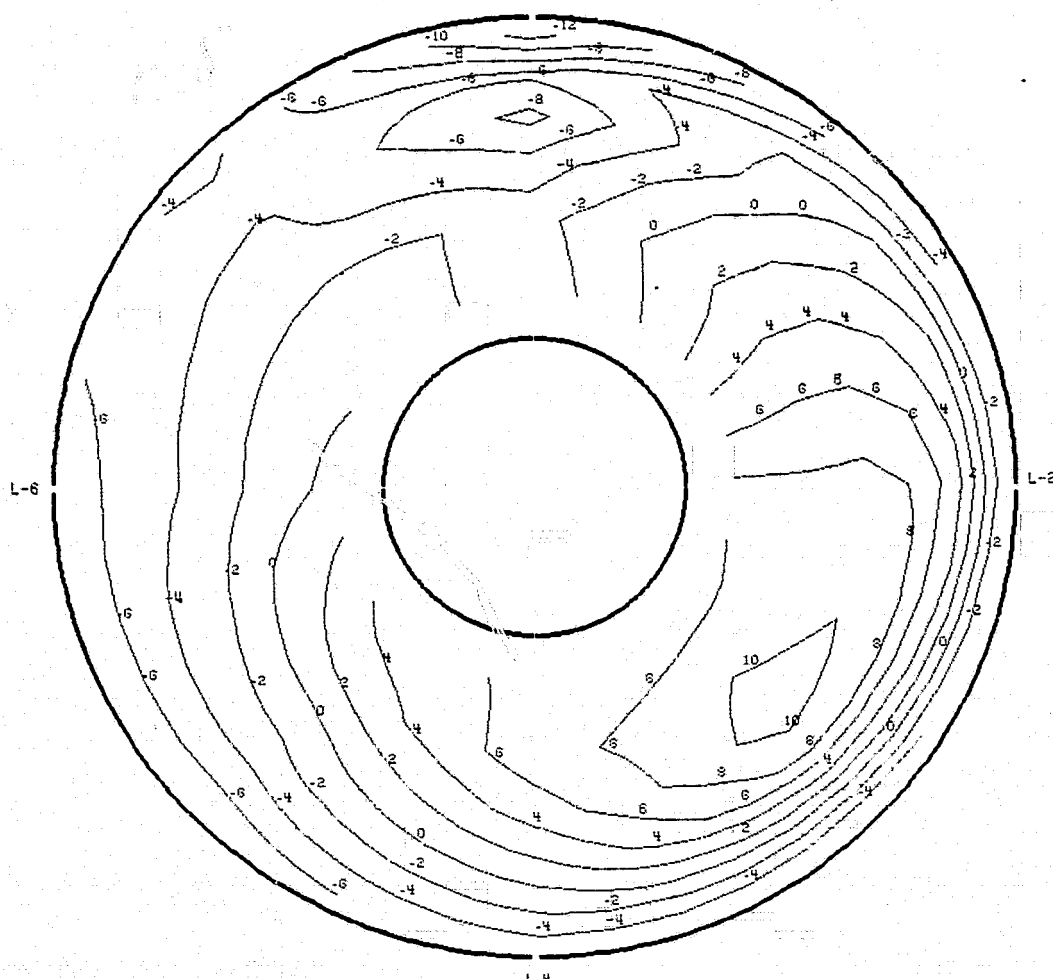
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:16:07.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.94	-8.9	10.2	13402(43970)	1.0	10.5	0.0	107.1%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
24.67(3.578)	1.0	.3509	.1727	.1608	.5119	.3329	—	.2371

19 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 24.67 kPa (3.578 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-19 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

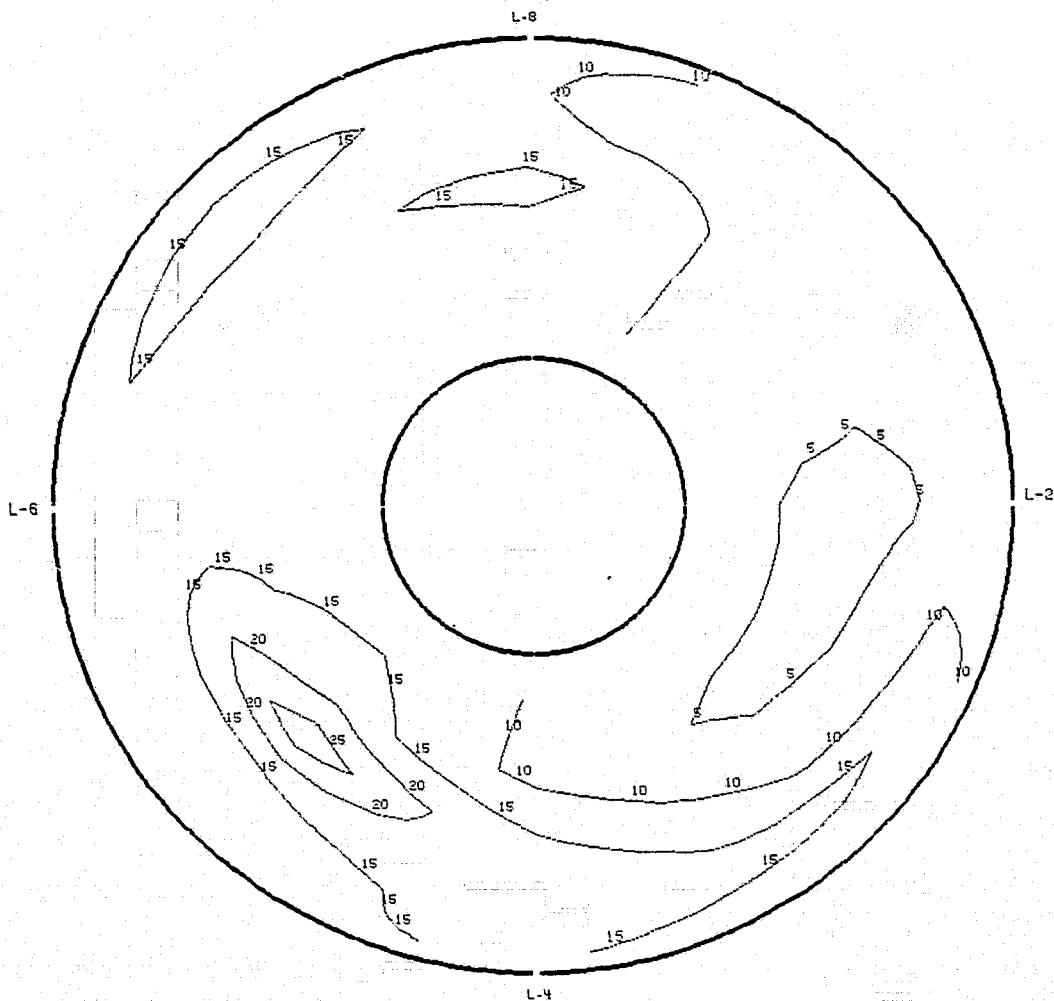
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:16:07.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.94	-8.9	10.2	13402 (43970)	1.0	10.5	0.0	107.1%	-8.00

19 (k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0115

FIGURE G-19 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

$M_0 = 0.94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

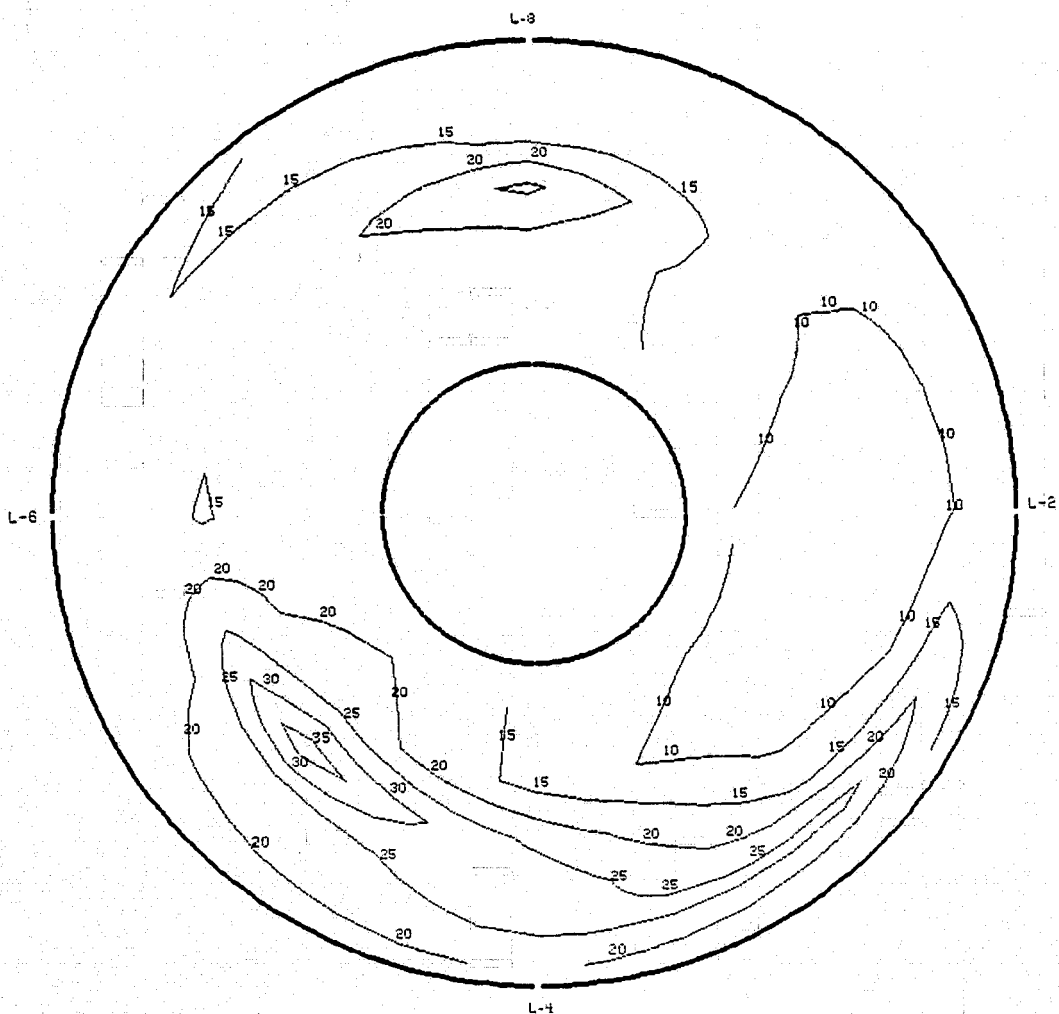
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:16:07.338

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.94	-8.9	10.2	13402 (42970)	1.0	10.5	0.0	107.1%	-5.00

19 (I) Turbulence Contour
100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0161

FIGURE G-19 (Continued)

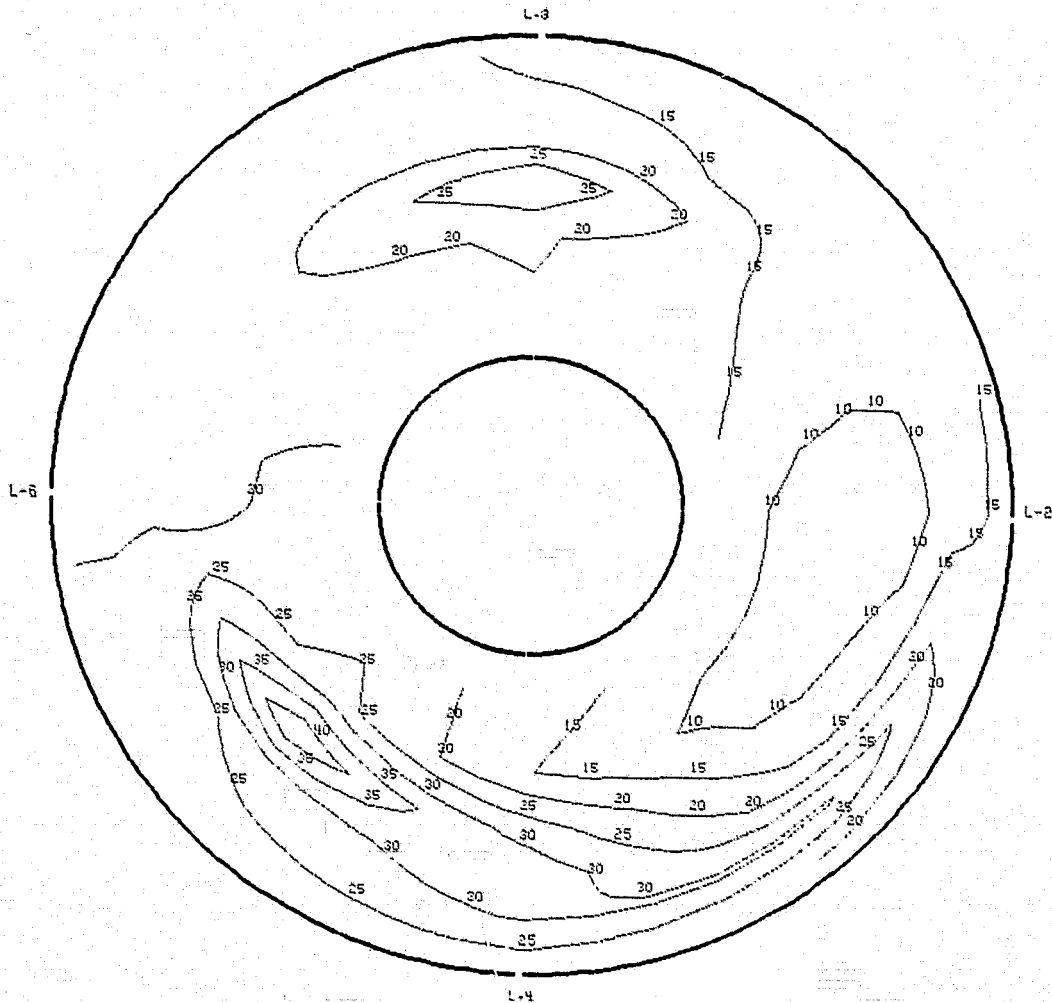
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:16:07.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.94	-8.9	10.2	13402(43970)	1.0	10.5	0.0	107.1%	-5.000

19(m) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0189

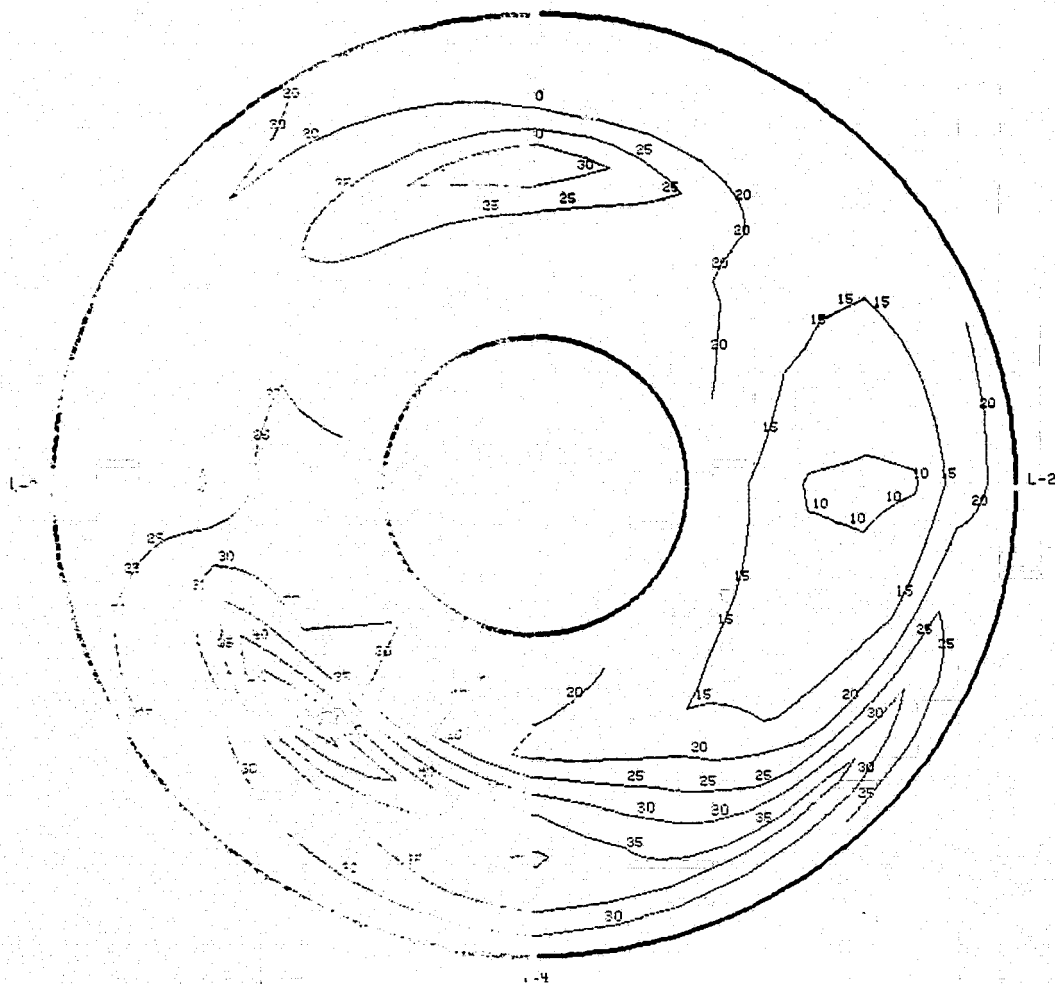
FIGURE G-19 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:18:07.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.94	-8.3	9.8	13402 (43970)	1.0	10.5	0.0	107.1%	-8.00

19(n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0241

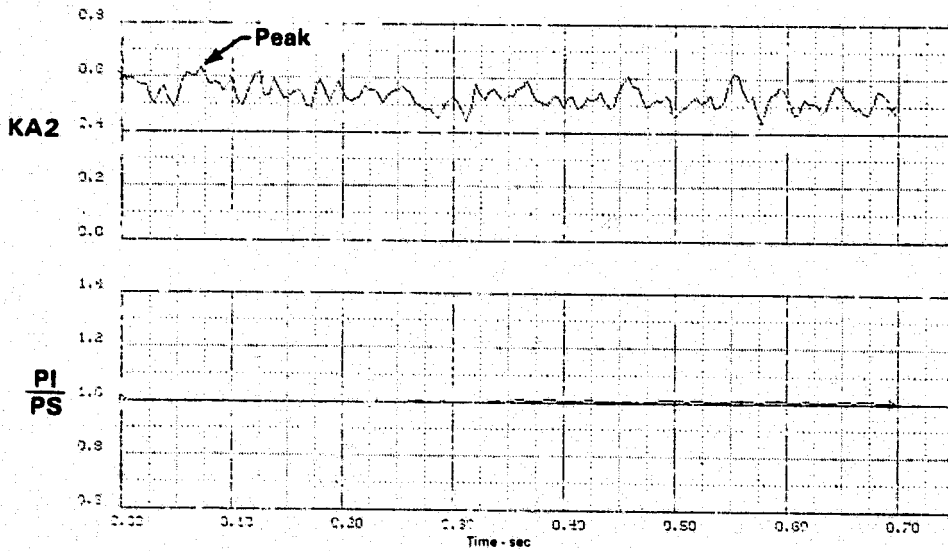
FIGURE G-19 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.94$, $\alpha = -8.3$, $\beta = 9.8$, $WAT2 = 107.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:16:07.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.94	-8.9	10.2	13446 (44114)	1.0	10.6	0.0	107.1%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
24.61 (3.57)	0.9978	0.4373	0.2122	0.1976	0.6348	0.4711	0.4772	0.2390

19(o) Time History Plots
45 Hz



PEAK AT TIME = 0.070833 SECONDS

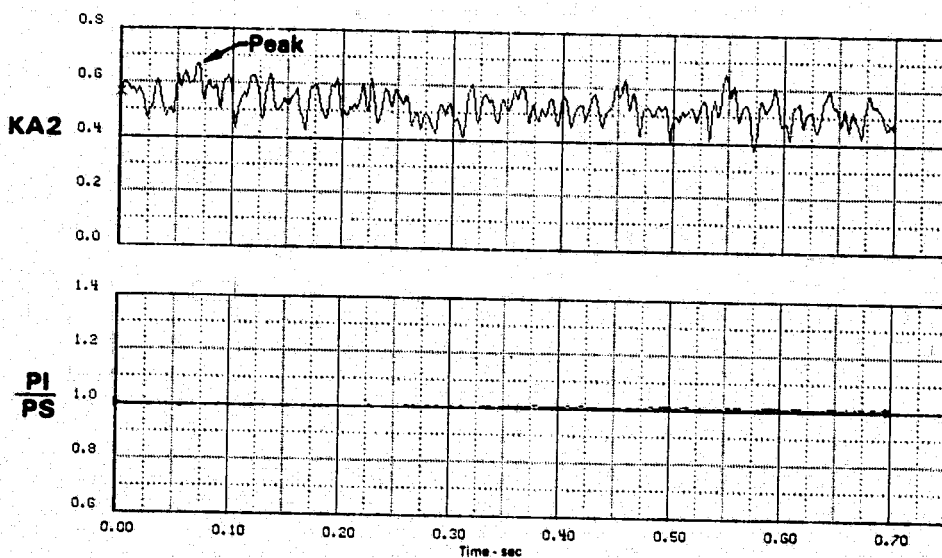
FIGURE G-19 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:16: 07.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.94	-8.9	10.2	13446 (44114)	1.0	10.5	0.0	107.1%	-8.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	O2
24.85 (3.56)	0.9950	0.4600	0.2228	0.2071	0.6672	0.4952	.5143	0.2483

19(p) Time History Plots
100 Hz



PEAK AT TIME = 0.068055 SECONDS

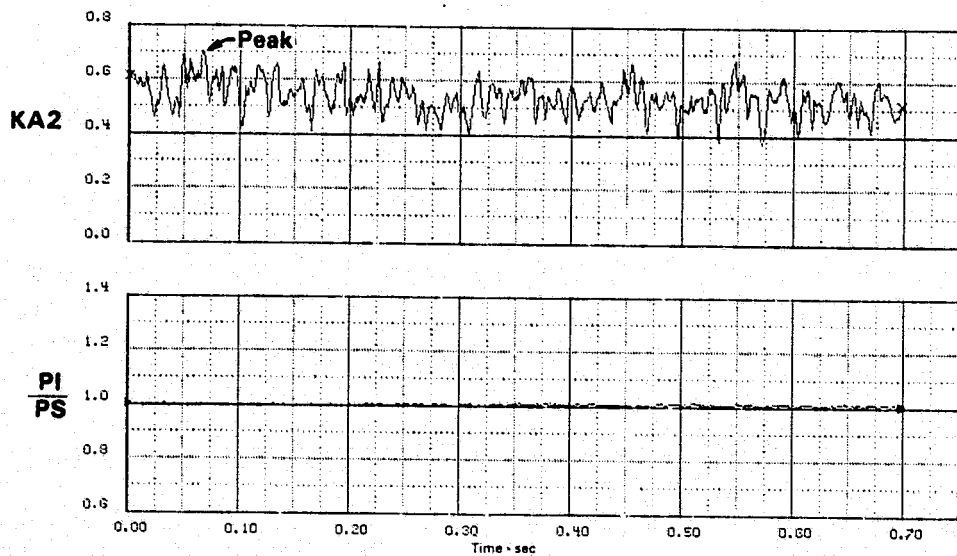
FIGURE G-19 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:16:07.355

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.94	-8.9	10.2	13446(44114)	1.0	10.5	0.0	107.1%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
24.61(3.570)	.9978	.4834	.2320	.2160	.6992	.5494	.5352	.2608

19(q) Time History Plots
170 Hz



PEAK AT TIME = 0.06667 SECONDS

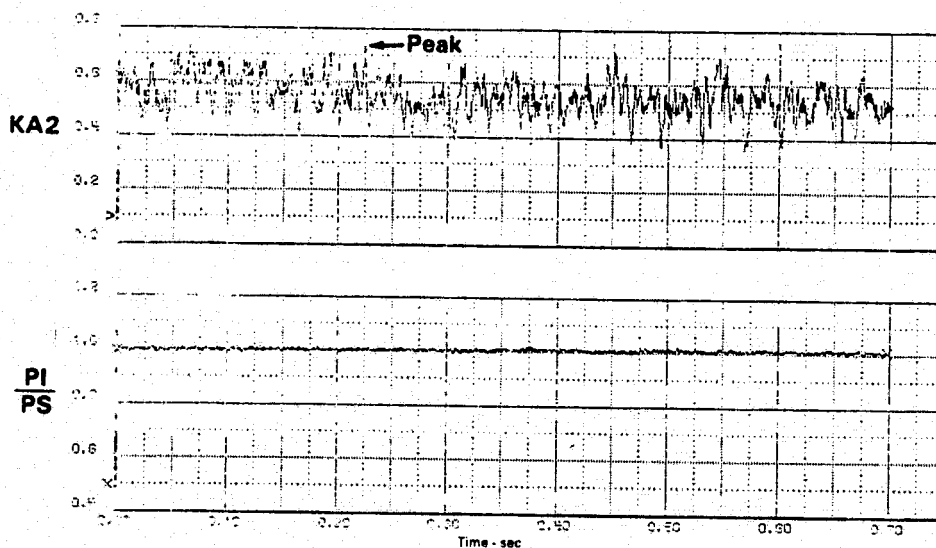
FIGURE G-19 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:16:07.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.94	-8.3	9.8	13414 (44010)	1.0	10.5	0.0	107.1%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
24.70 (3.583)	1.0787	0.4959	0.2523	0.2349	0.7308	0.5747	0.4998	0.3016

19(r) Time History Plots
500 Hz



PEAK AT TIME = 0.22372 SECONDS

FIGURE G-19 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.94$, $\alpha = -8.3$, $\beta = 9.8$, $WAT2 = 107.1\%$

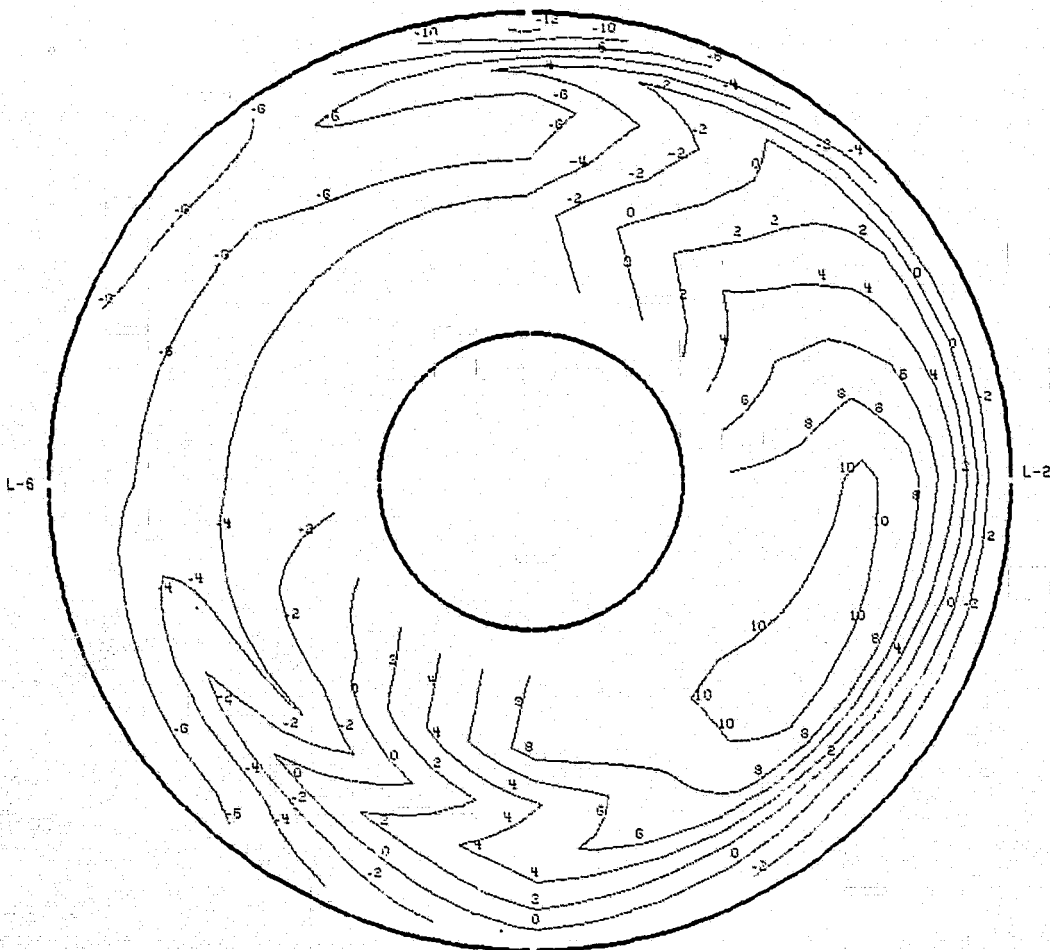
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:16:07.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.94	-8.9	10.2	13446 (44114)	1.0	10.5	0.0	107.1%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
24.61 (3.57)	0.9978	0.4373	0.2122	0.1976	0.6348	0.4711	0.4772	0.2390

19(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz



MEAN FACE PRESSURE = 24.61 kPa (3.57 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.070833 SECONDS

FIGURE G-19 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

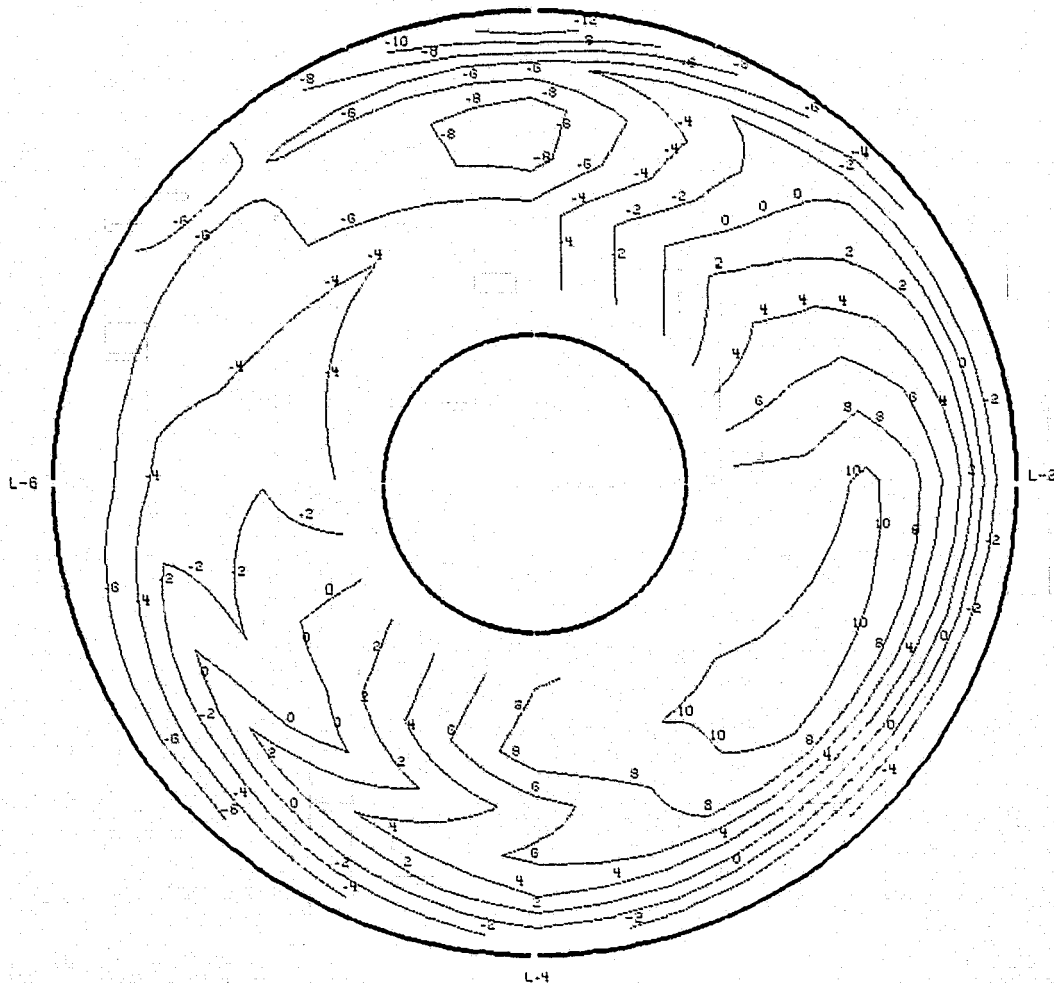
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:16:07.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.94	-8.9	10.2	13446 (44114)	1.0	10.5	0.0	107.1%	-5.00
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	K0SP	D2
24.55 (3.56)	0.9950	0.4800	0.2225	0.2071	0.6672	0.4952	.5143	0.2483

19(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz



MEAN FACE PRESSURE = 24.55 kPa (3.56 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.068055 SECONDS

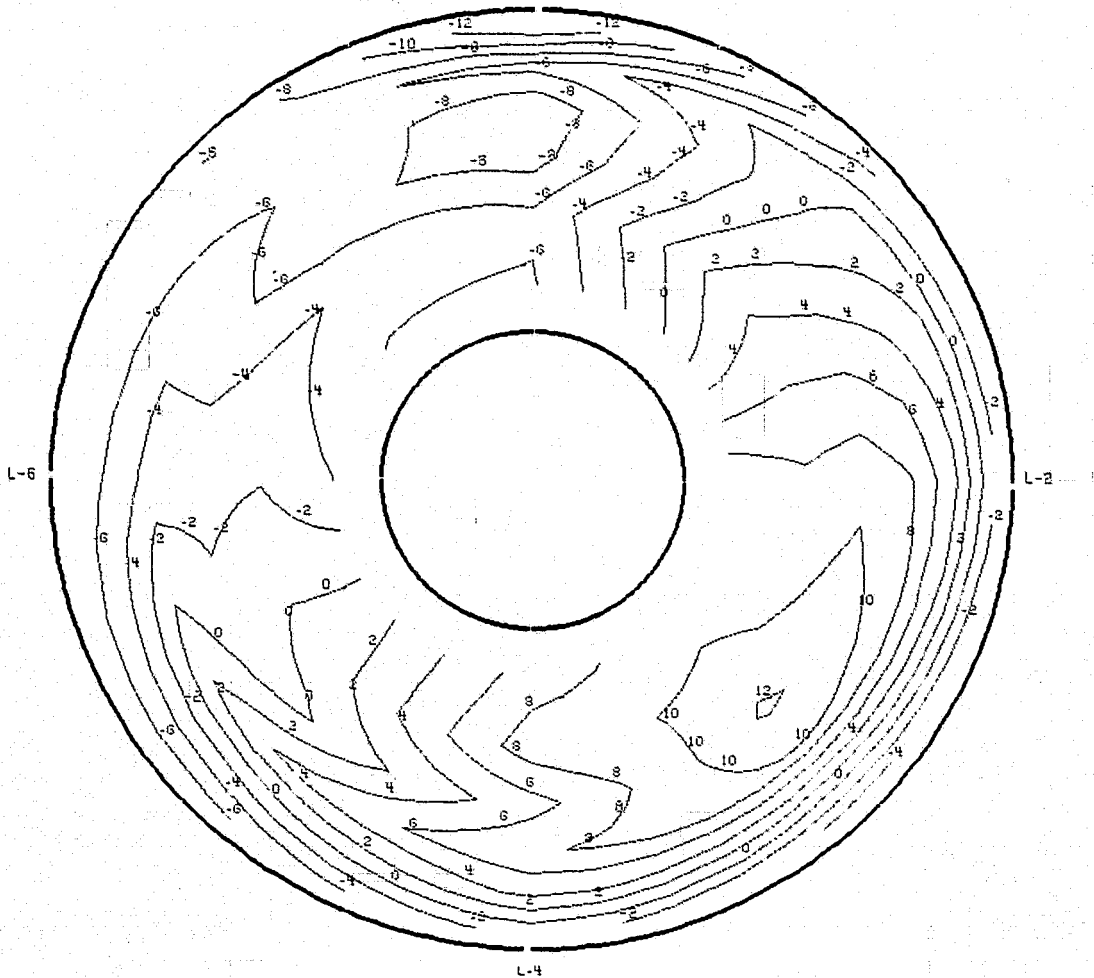
FIGURE G-19 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:16:07.355

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.94	-8.9	10.2	13446(44114)	1.0	10.5	0.0	107.1%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
24.61(3.570)	.9978	.4834	.2320	.2160	.6992	.5494	.5352	.2608

19(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 24.61 kPa (3.570 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.06667 SECONDS

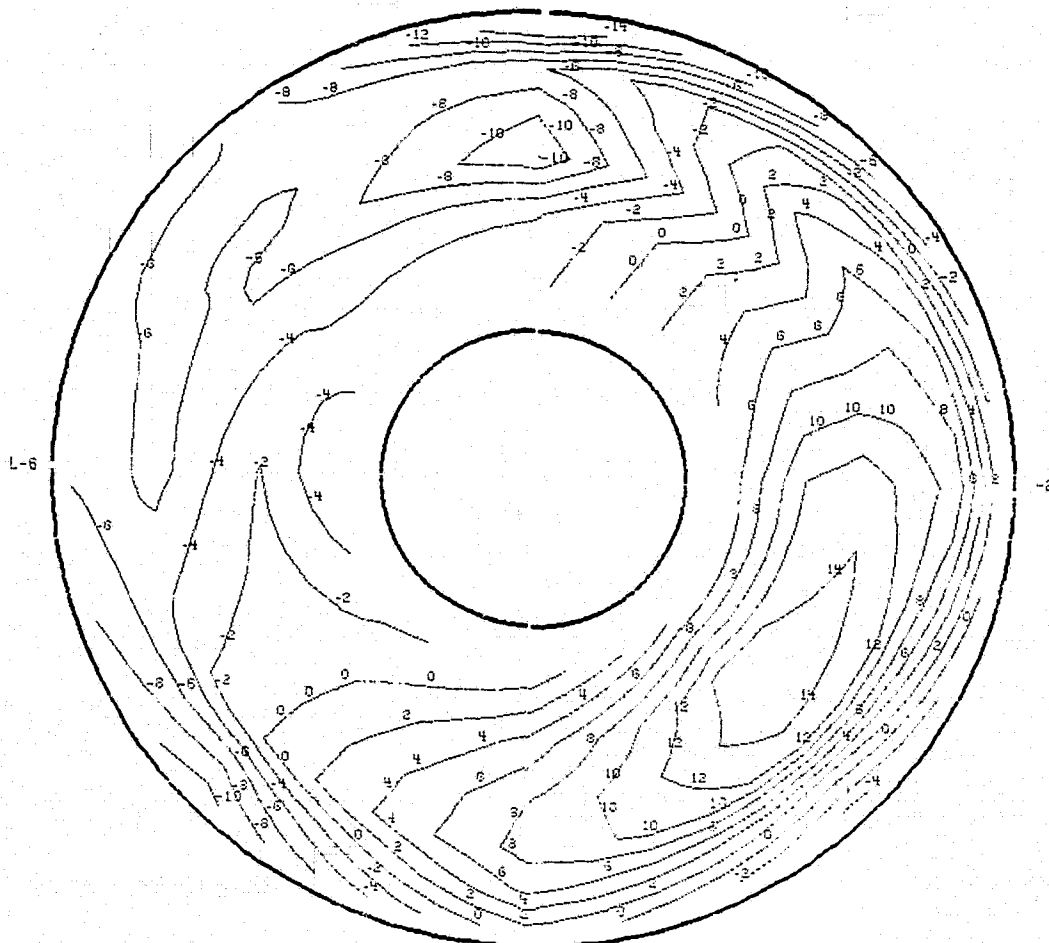
FIGURE G-19 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .94$, $\alpha = -8.9$, $\beta = 10.2$, $WAT2 = 107.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/14 IDENT. 19
THE SEGMENT START TIME WAS AT 21:16:07.335

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
0.94	-8.3	9.8	13414 (44010)	1.0	10.5	0.0	107.1%	-5.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
24.70 (3.583)	1.0787	0.4959	0.2523	0.2349	0.7308	0.5747	0.4998	0.3016

19 (v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz



MEAN FACE PRESSURE = 24.70 kPa (3.583 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.22372 SECONDS

FIGURE G-19 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.94$, $\alpha = -8.3$, $\beta = 9.8$, $WAT2 = 107.1\%$

FSE - NASA Data Study
 Part/Point - 102/2, Ident 20
 RHO DELTA3 BYPASS CIVV
 -1.0 8.2 0.0 -10.90

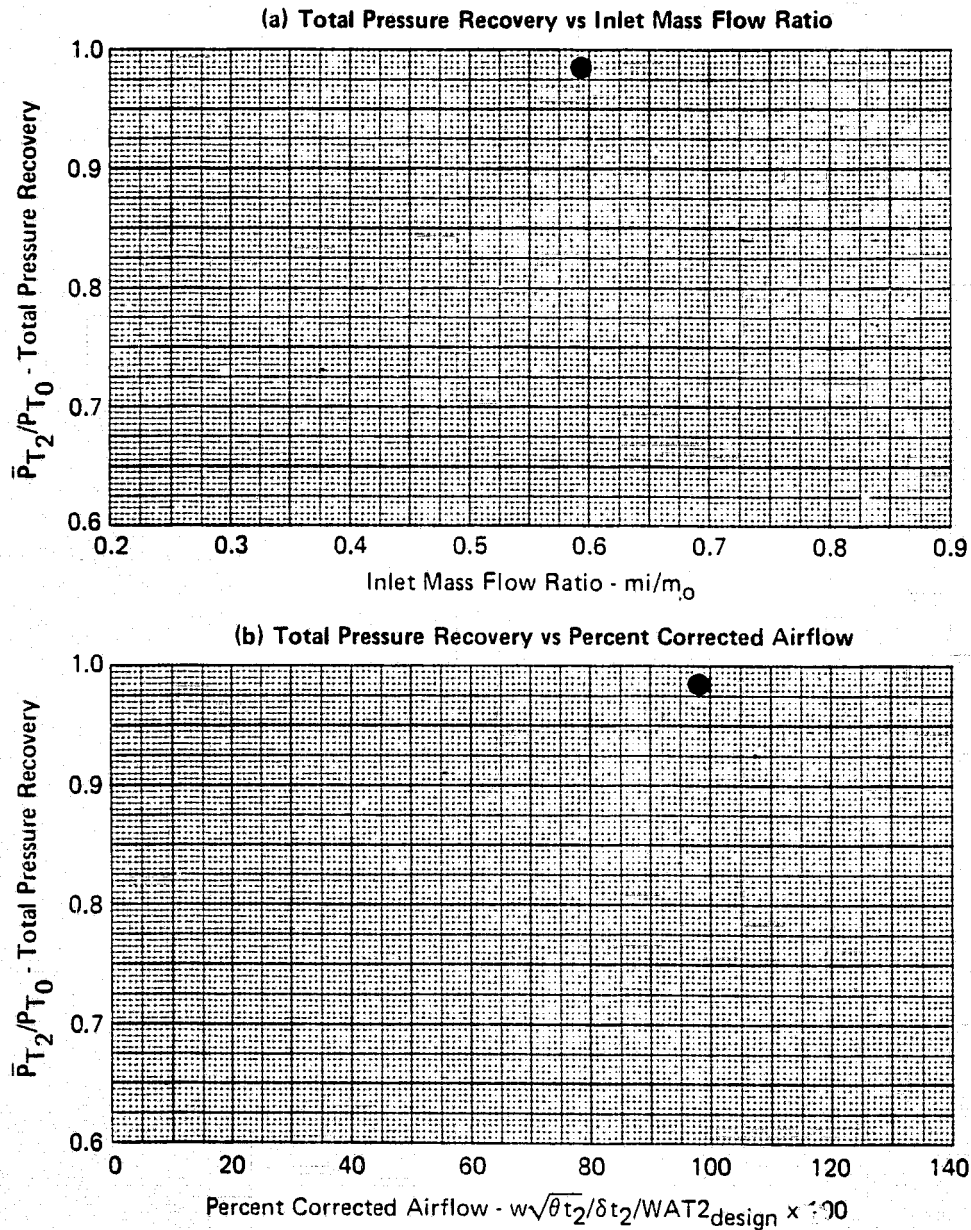
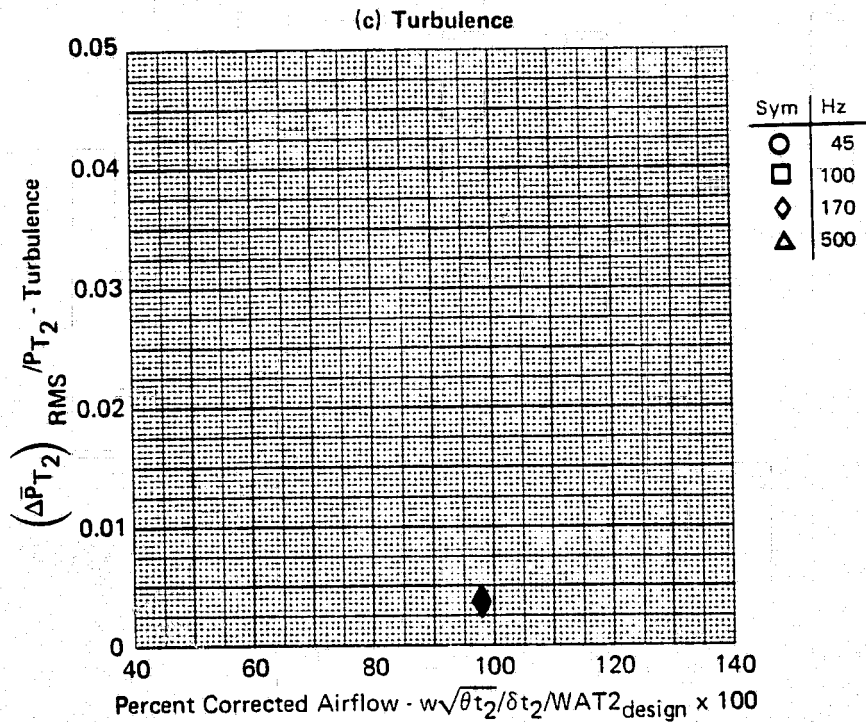


FIGURE G-20
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = -4.0, \beta = 0.0, WAT2 = 97.8 \%$

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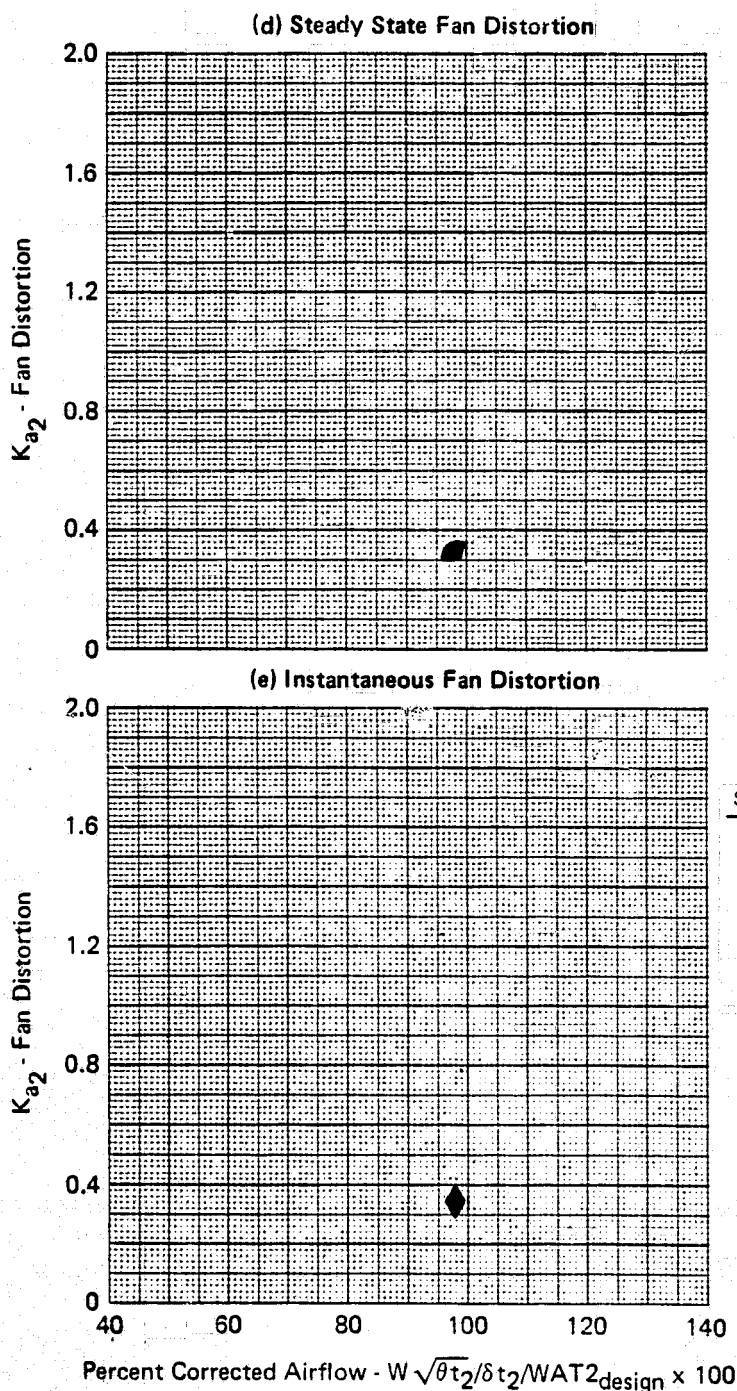
FSE - NASA Data Study
 Part/Point - 102/2, Ident 20
 RHO DELTA3 BYPASS CIVV
 -1.0 8.2 0.0 -10.90



GP77-0658-5

FIGURE G-20 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 97.8\%$

FSE - NASA Data Study
 Part/Point - 102/2, Ident 20
 RHO DELTA3 BYPASS CIVV
 -1.0 8.2 0.0 -10.90



GP77-0658-3

FIGURE G-20 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = -4.0, \beta = 0.0, WAT2 = 97.8 \%$

FSE - NASA Data Study
 Part/Point - 102/2, Ident 20
 RHO DELTA3 BYPASS CIVV
 -1.0 8.2 0.0 -10.90

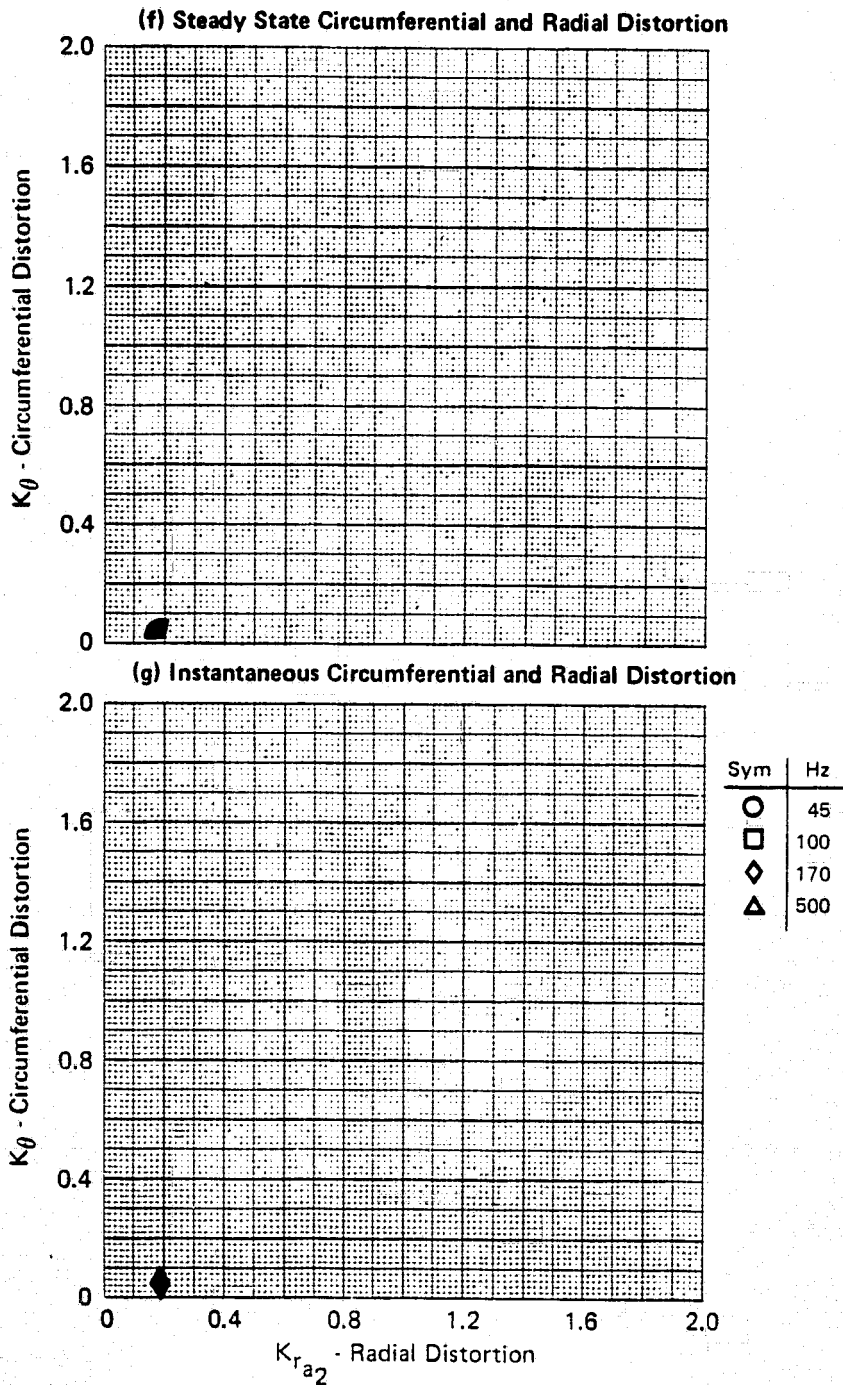
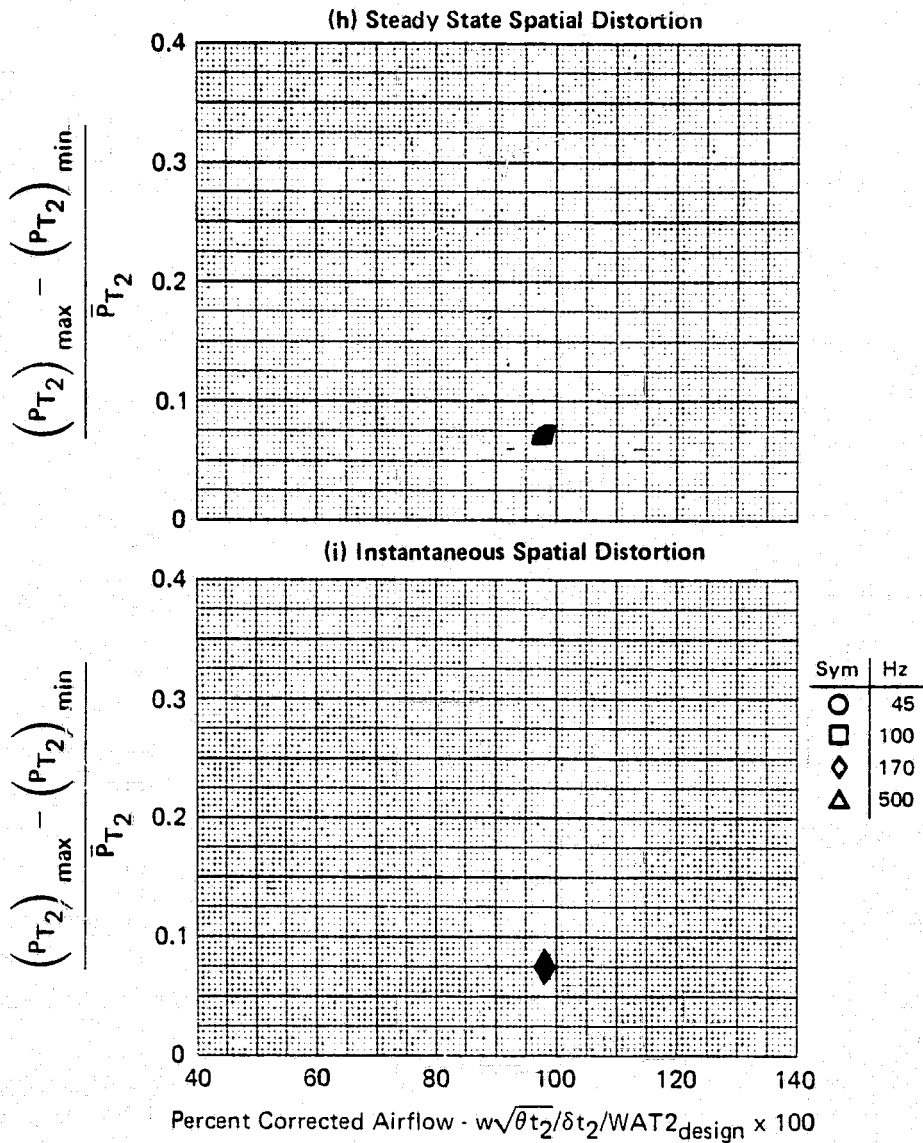


FIGURE G-20 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 97.8 %

FSE - NASA Data Study

Part/Point - 102/2, Ident 20

RHO	DELTA3	BYPASS	CIVV
-1.0	8.2	0.0	-10.90



GP77-0658-4

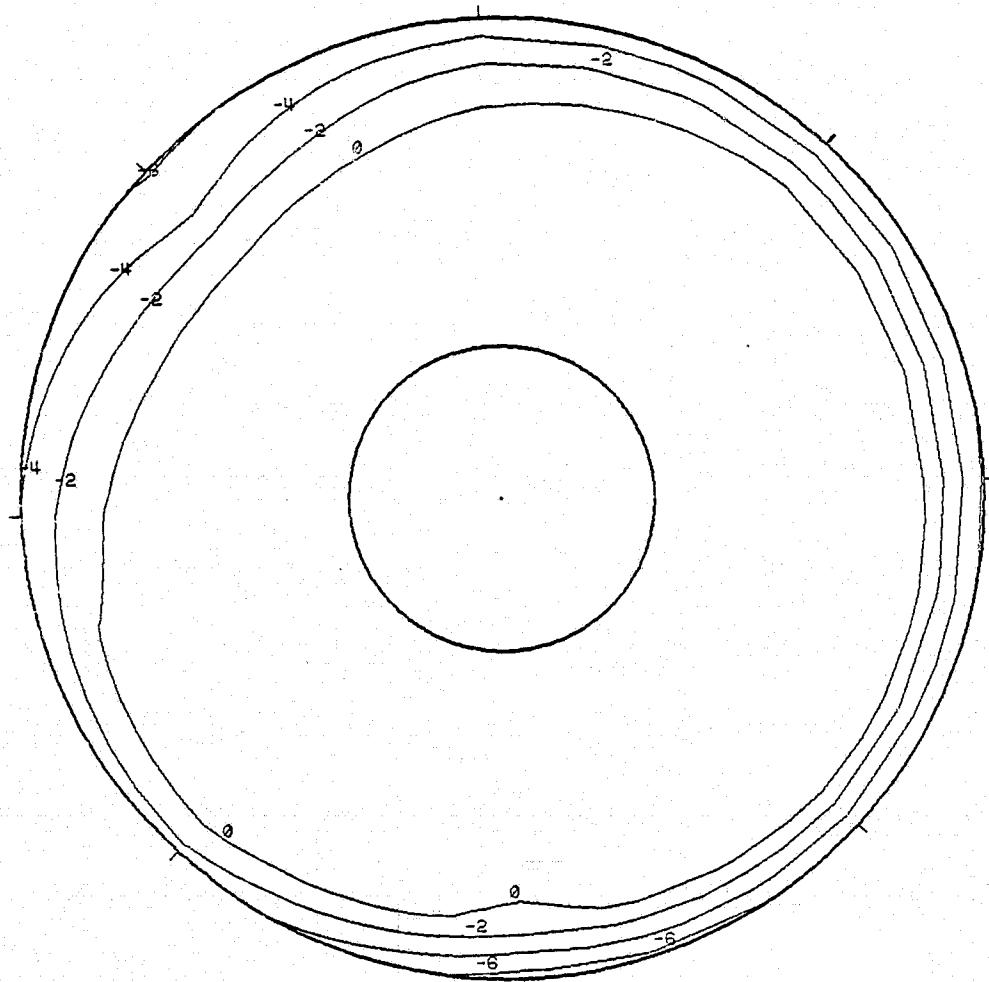
FIGURE G-20 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = -4.0, \beta = 0.0, WAT2 = 97.8 \%$

FSE - NASA DATA STUDY

DATA PART/POINT 102 / 2 IDENT. 20
THE SEGMENT START TIME WAS AT 5:45:32.428

MACH 0.9	ALPHA -4	BETA 0	RHO -1.0	DELTA3 8.2	BYPASS 0.0	WAT2 97.8%	CIVV -10.9
P1 84.38 (12.239)	P1/PS 1.000	KTHETA 0.035	KRA2 0.177	BKRA2 0.237	KA2 0.323	KC2 0.010	KESP 0.008
							D2 0.071

20 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 84.38 kPa (12.239 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

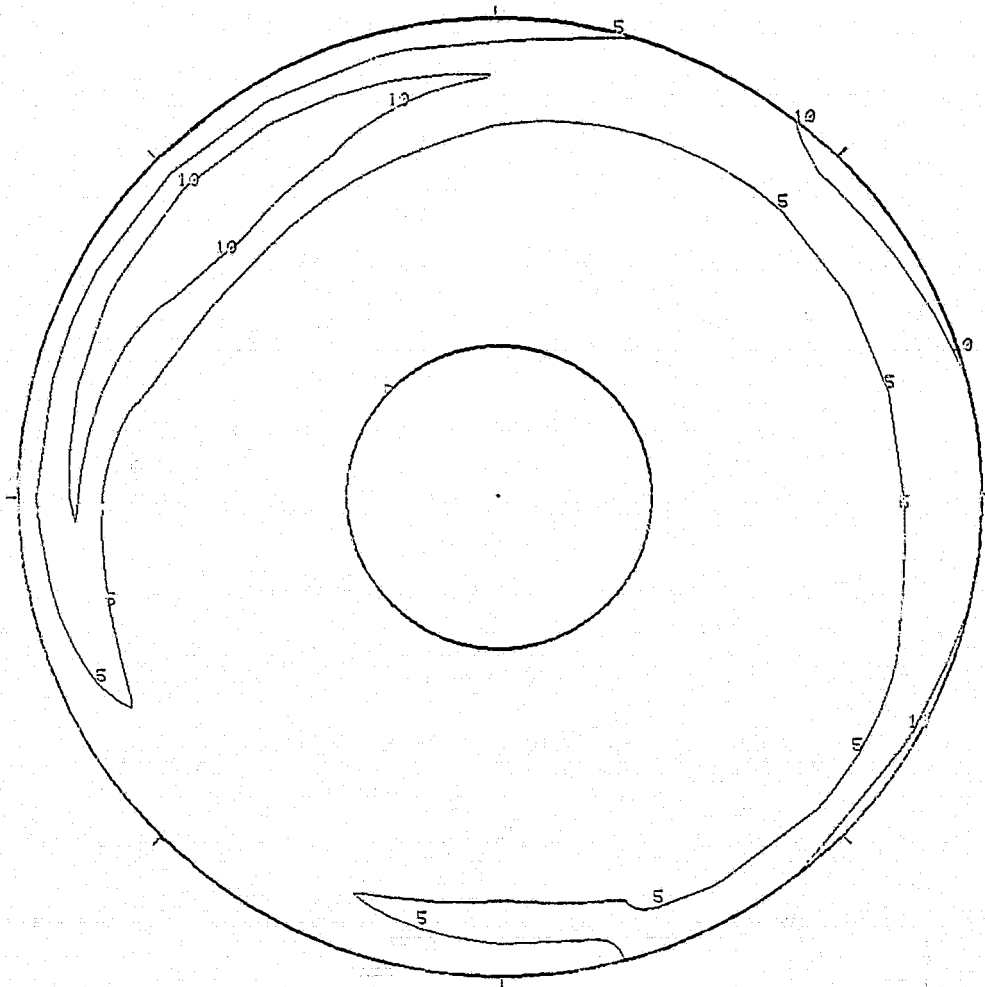
FIGURE G-20 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 97.8 %

FSE - NASA DATA STUDY

DATA PART/POINT 102 / 2 IDENT. 20
THE SEGMENT START TIME WAS AT 5:45:32.428

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
0.9	-4	0	-1.0	8.2	0.0	97.8%	-10.9

20(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00350

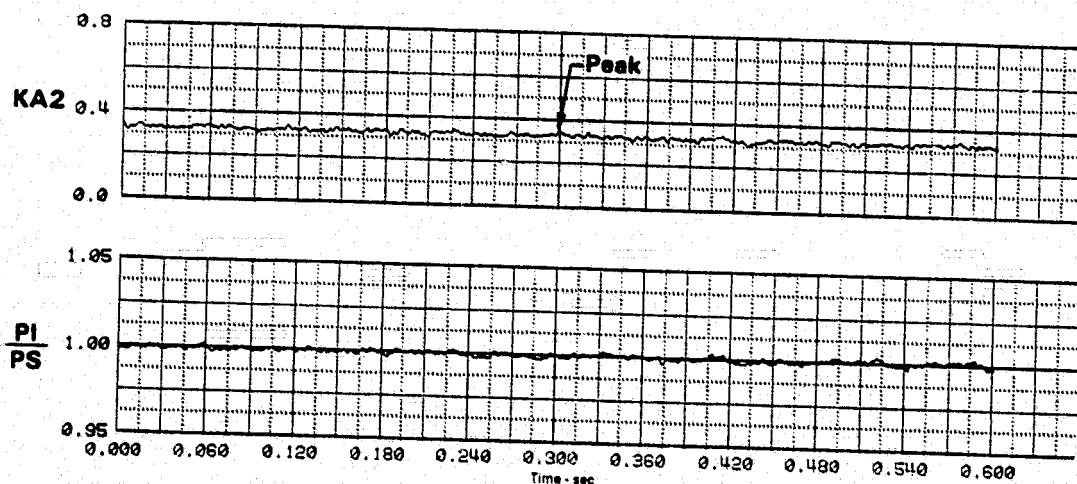
FIGURE G-20 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 97.8\%$

FSE - NASA DATA STUDY

DATA PART/POINT 102 / 2 IDENT. 20
THE SEGMENT START TIME WAS AT 5:45:32.428

MACH 0.9	ALPHA -4	BETA 0	RHO -1.0	DELTA3 8.2	BYPASS 0.0	WAT2 97.8%	CIVV -10.9
PI 84.41 (12.243)	PI/PS 1.000	KTHETA 0.045	KRA2 0.187	BKRA2 0.303	KA2 0.348	KC2 0.020	KCSP 0.016
							D2 0.075

20(I) Time History Plots 170 Hz



PEAK AT TIME = 0.299714 SECONDS

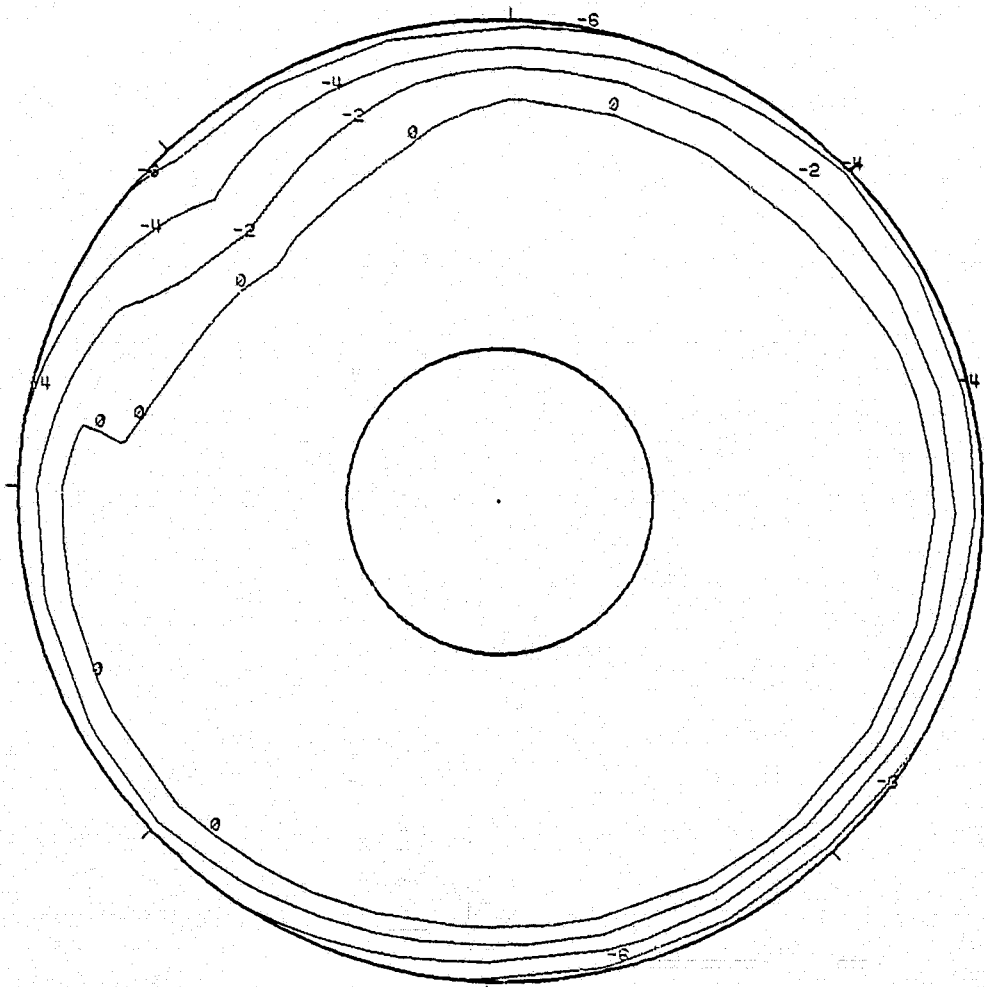
FIGURE G-20 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 97.8\%$

FSE - NASA DATA STUDY

DATA PART/POINT 102 / 2 IDENT. 20
THE SEGMENT START TIME WAS AT 5:45:32.428

MACH 0.9	ALPHA -4	BETA 0	RHO -1.0	DELTA3 8.2	BYPASS 0.0	WAT2 97.8%	CIVV -10.9
P1 84.41 (12.243)	PI/PS 1.000	KTHETA 0.045	KRA2 0.187	BKRA2 0.303	KA2 0.348	KC2 0.020	KOSP 0.016
							D2 0.075

20(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 84.41 kPa (12.243 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.299714 SECONDS

FIGURE G-20 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 97.8\%$

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FLIGHT - NASA Data Study
Part/Point - 424/10, Ident 21

RHO	DELTA3	BYPASS	CIVV
-1.2	8.7	0.0	-12.896

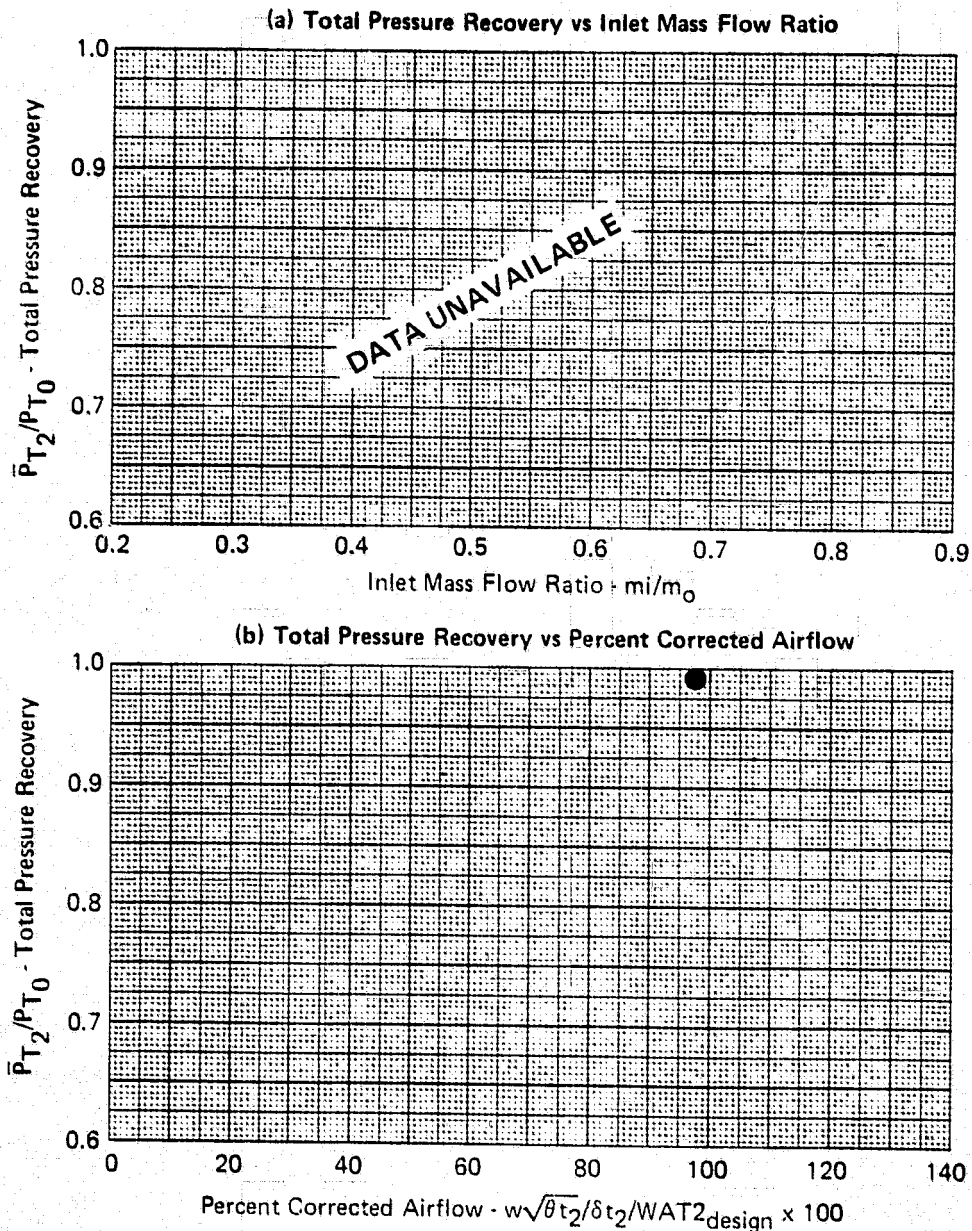
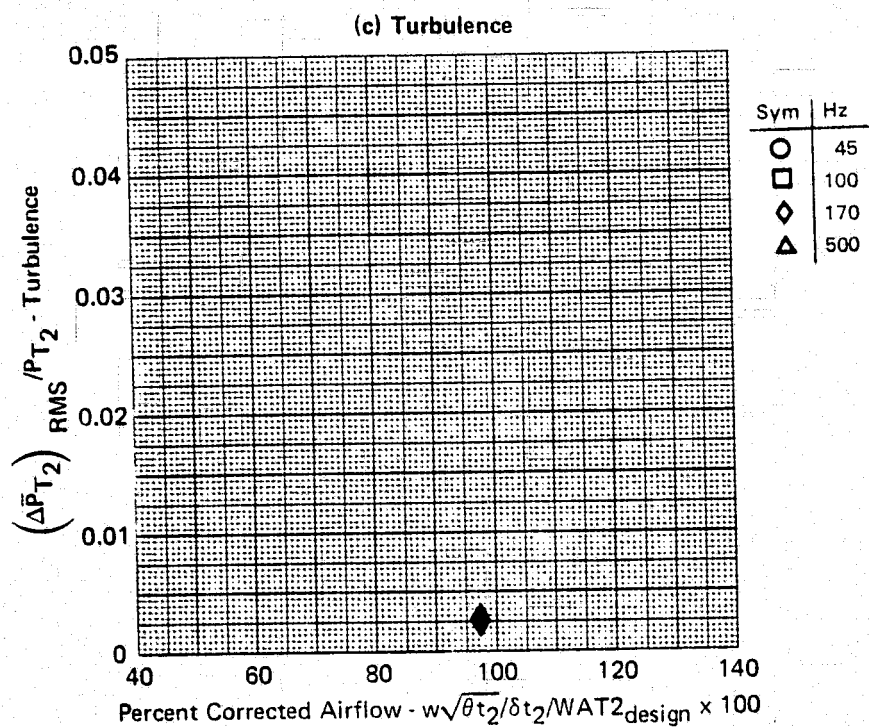


FIGURE G-21
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = -2.8$, $\beta = -.2$, $WAT2 = 97.5\%$

GP77-0658-1

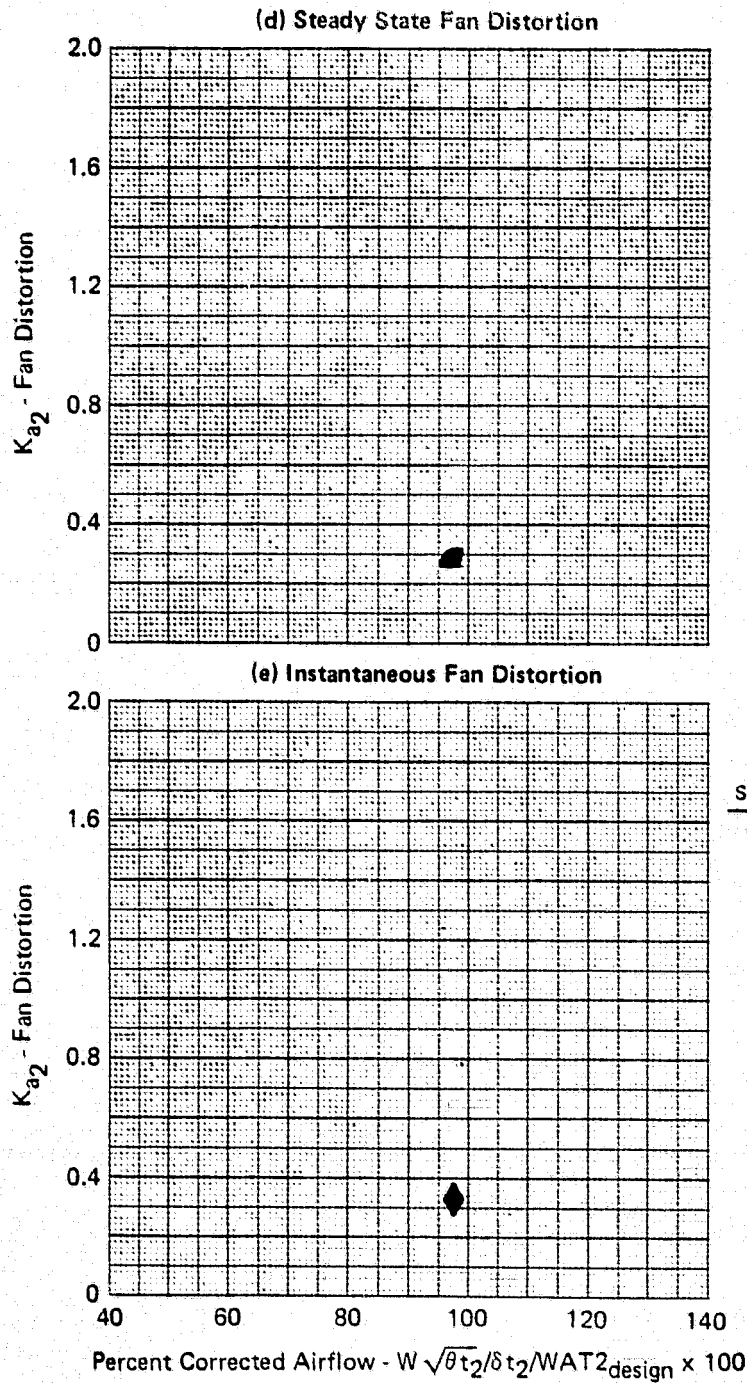
FLIGHT - NASA Data Study
 Part/Point - 424/10, Ident 21
 RHO DELTA3 BYPASS CIVV
 -1.2 8.7 0.0 -12.896



GP77-0658-5

FIGURE G-21 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = -2.8$, $\beta = -.2$, $WAT2 = 97.5\%$

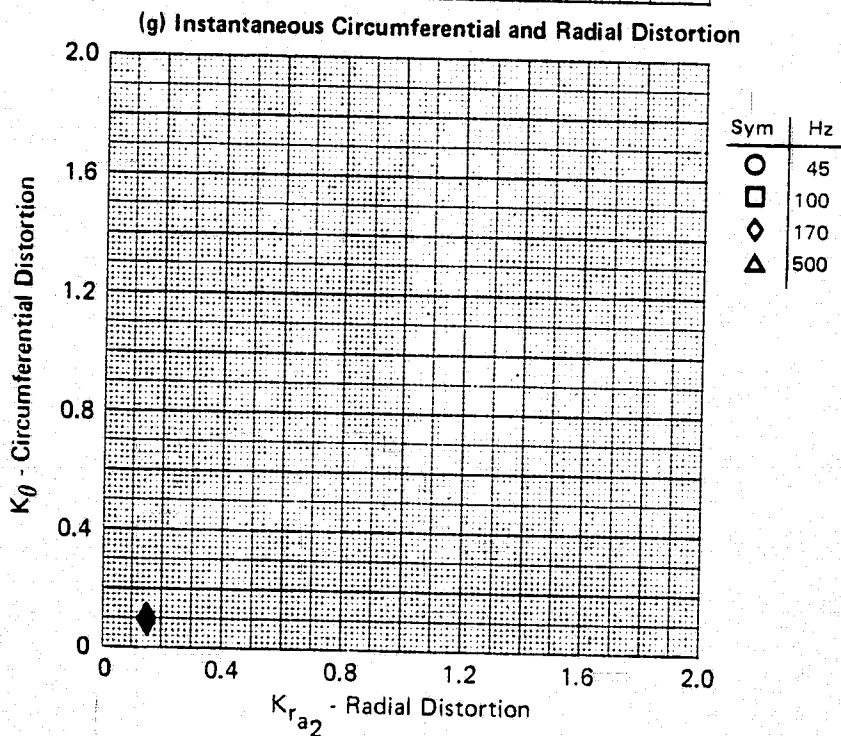
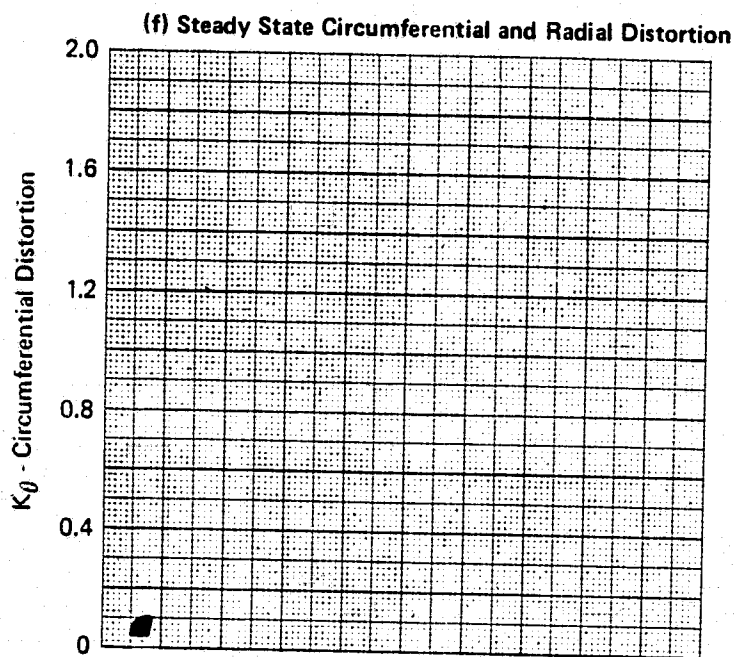
FLIGHT - NASA Data Study
 Part/Point - 424/10, Ident 21
 RHO DELTA3 BYPASS CIVV
 -1.2 8.7 0.0 -12.896



GP77 0658-J

FIGURE G-21 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = -2.8$, $\beta = -0.2$, $WAT2 = 97.5\%$

FLIGHT - NASA Data Study
 Part/Point - 424/10, Ident 21
 RHO DELTA3 BYPASS CIVV
 -1.2 8.7 0.0 -12.896



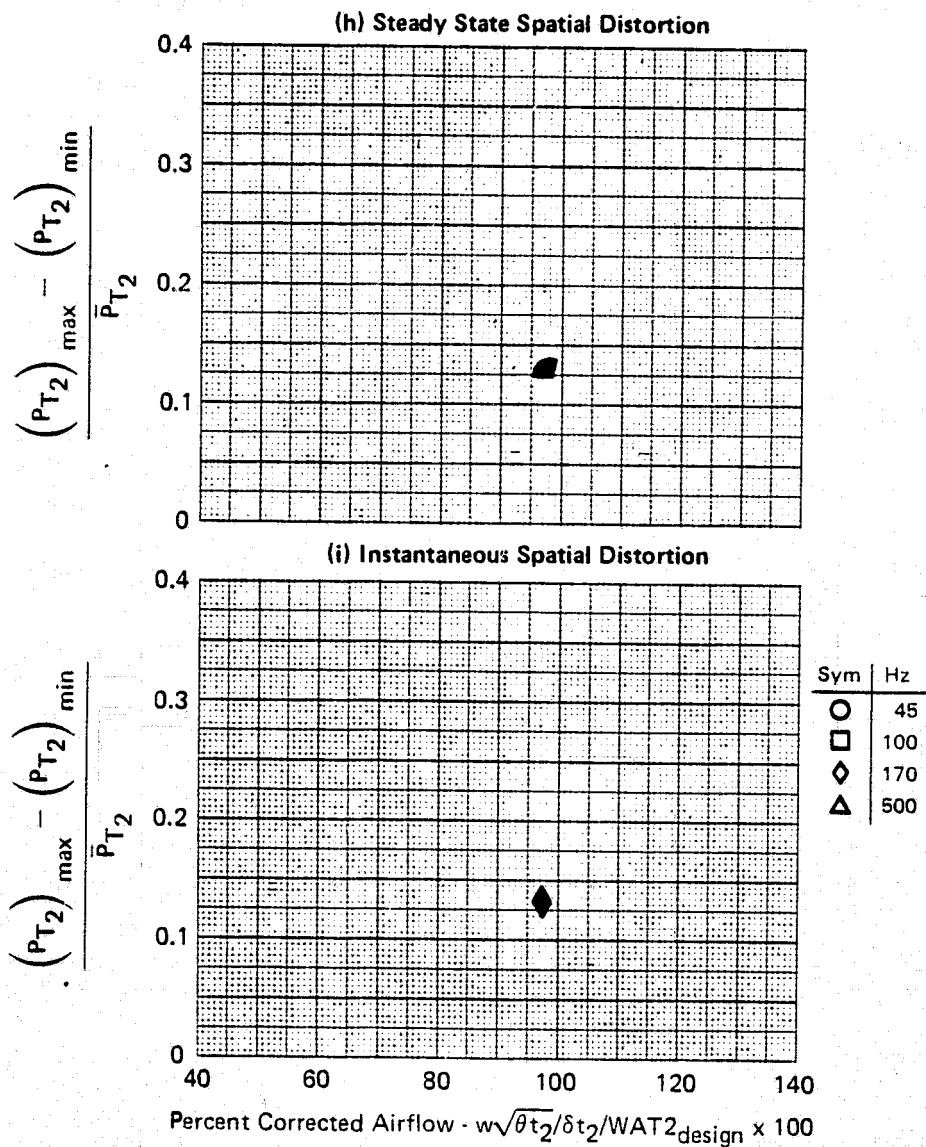
GP77-0658-2

FIGURE G-21 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = -2.8$, $\beta = -.2$, $WAT2 = 97.5\%$

FLIGHT - NASA Data Study

Part/Point - 424/10, Ident 21

RHO	DELTA3	BYPASS	CIVV
-1.2	8.7	0.0	-12.896



GP77-0658-4

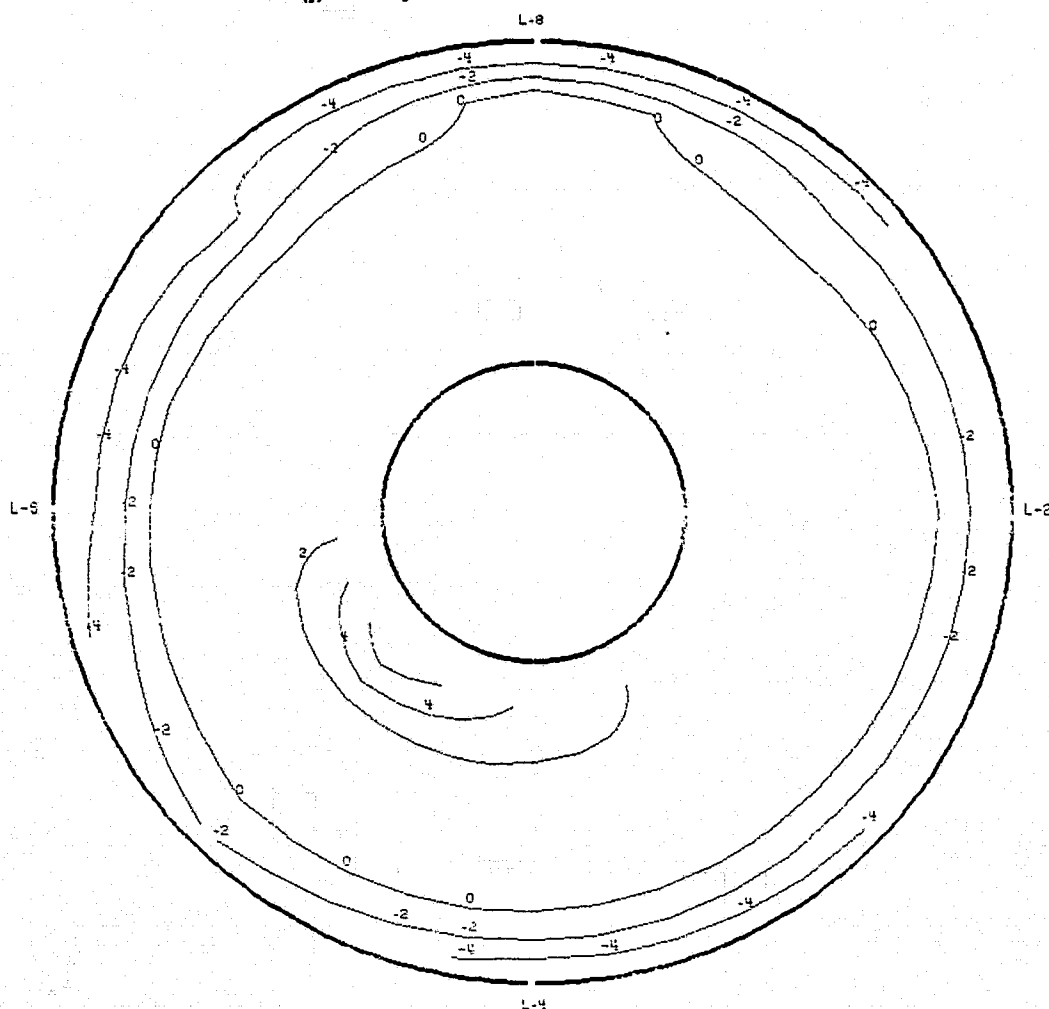
FIGURE G-21 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = -2.8$, $\beta = -.2$, $WAT2 = 97.5\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/10 IDENT. 21
THE SEGMENT START TIME WAS AT 04:10:42.501

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	-2.8	-0.2	6369(20897)	-1.2	8.7	0.0	97.5%	-12.896
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	K0SP	D2
75.12(10.895)	1.0	.0679	.1396	.2126	.2804	.0550	—	.1275

21 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 75.12 kPa (10.895 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-21 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = -2.8$, $\beta = -0.2$, $WAT2 = 97.5$ %

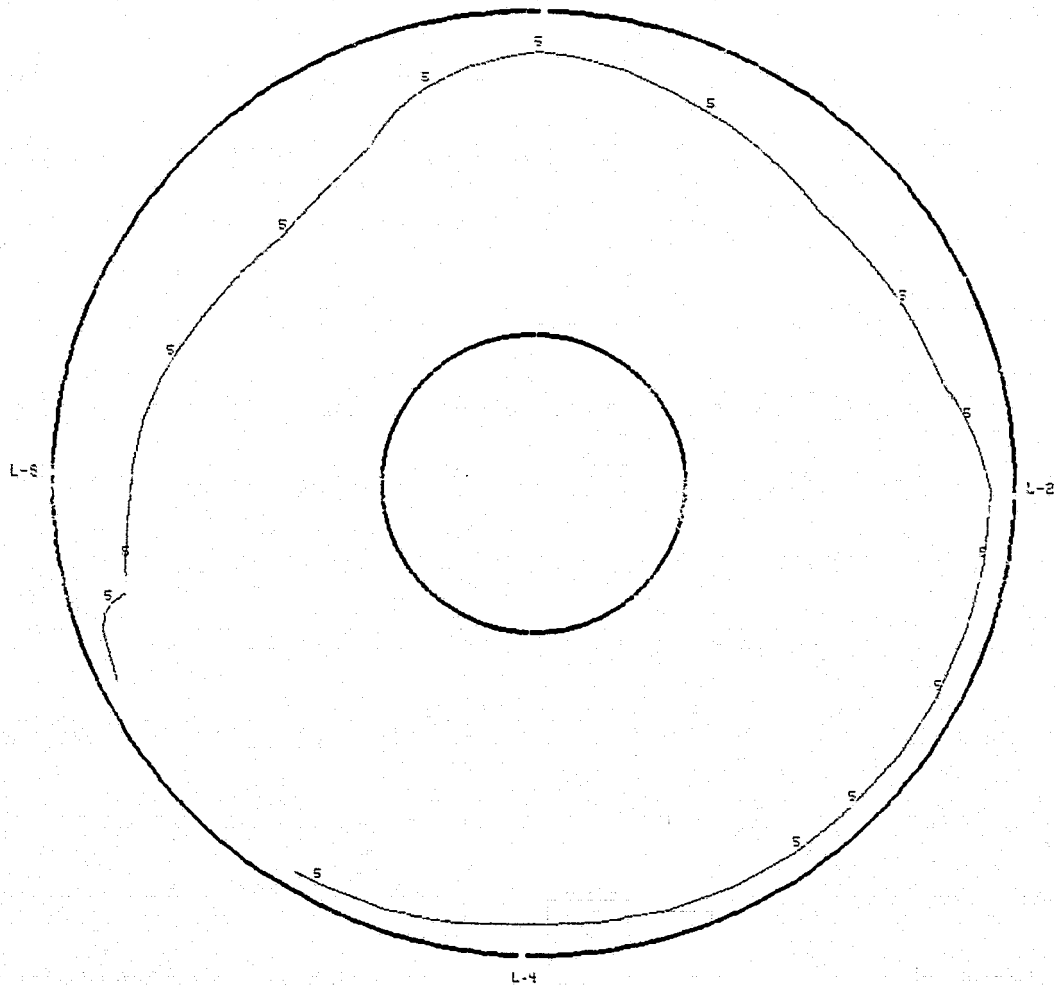
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/10 IDENT. 21
THE SEGMENT START TIME WAS AT 04:10:42.501

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	-2.8	-0.2	6369(20897)	-1.2	8.7	0.0	97.5%	-12.896

**21(k) Turbulence Contour
170 Hz**



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0026

FIGURE G-21 (Continued)

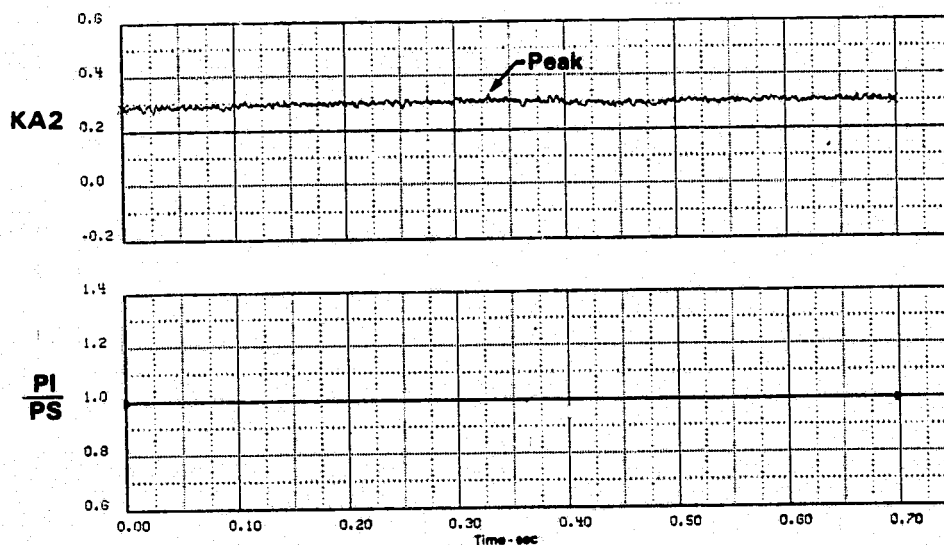
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = -2.8$, $\beta = -0.2$, $WAT2 = 97.5\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/10 IDENT. 21
THE SEGMENT START TIME WAS AT 04:10:42.501

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	-2.8	-0.2	6372(20907)	-1.2	8.7	0.0	97.5%	-12.696
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
74.60(10.82)	.9931	.1006	.1502	.2288	.3299	.0873	.1177	.1322

21 (I) Time History Plots
170 Hz



PEAK AT TIME = 0.3311 SECONDS

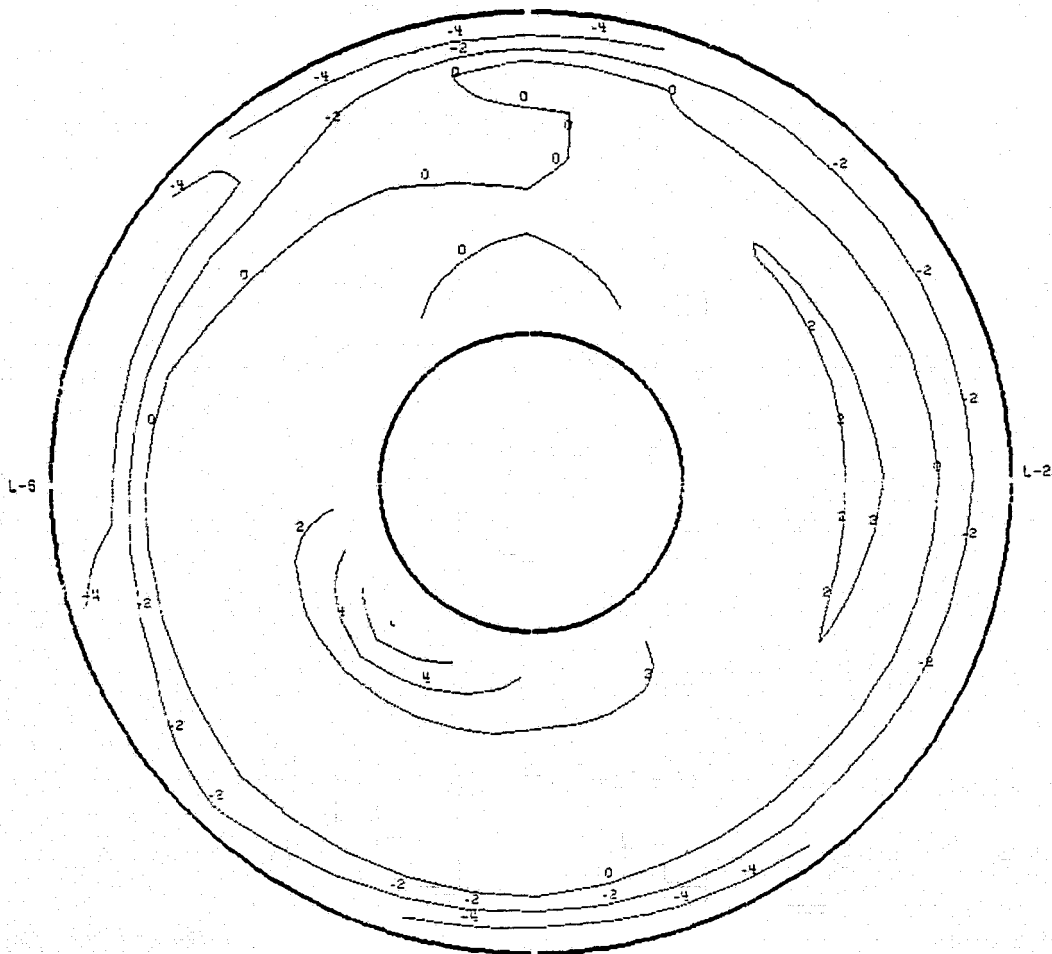
FIGURE G-21 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = -2.8$, $\beta = -0.2$, WAT2 = 97.5 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/10 IDENT. 21
THE SEGMENT START TIME WAS AT 04:10:42.501

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	-2.8	-0.2	6372(20907)	-1.2	8.7	0.0	97.5%	-12.896
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
74.60(10.82)	.9931	.1006	.1602	.2288	.3299	.0873	.1177	.1322

21(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 74.60 kPa (10.820 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.3311 SECONDS

FIGURE G-21 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .90$, $\alpha = -2.8$, $\beta = -0.2$, WAT2 = 97.5 %

FLIGHT - NASA Data Study
 Part/Point - 425/3, Ident 22
 RHO DELTA3 BYPASS CIVV
 -1.2 8.6 0.0 -5.00

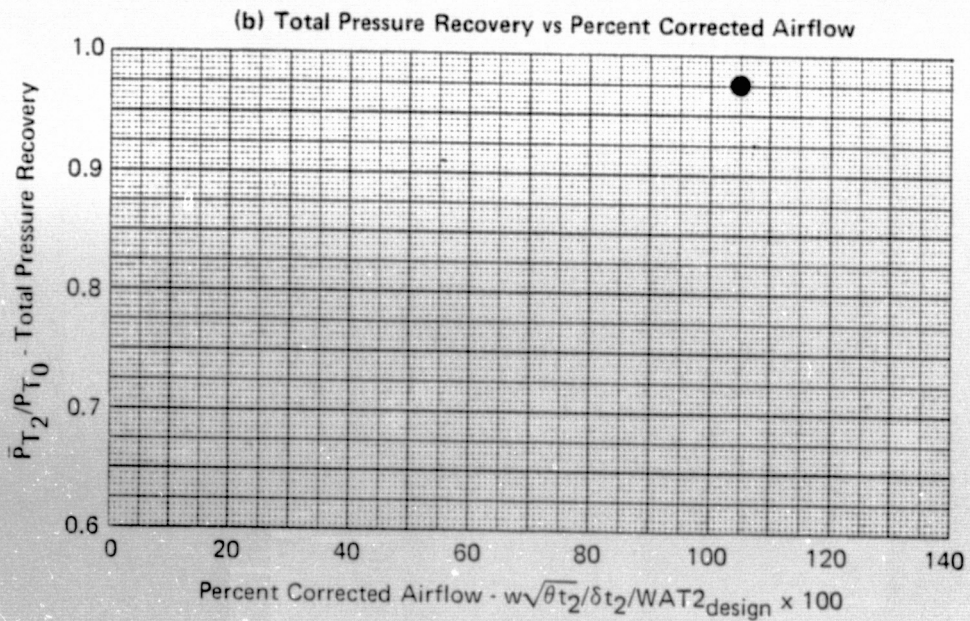
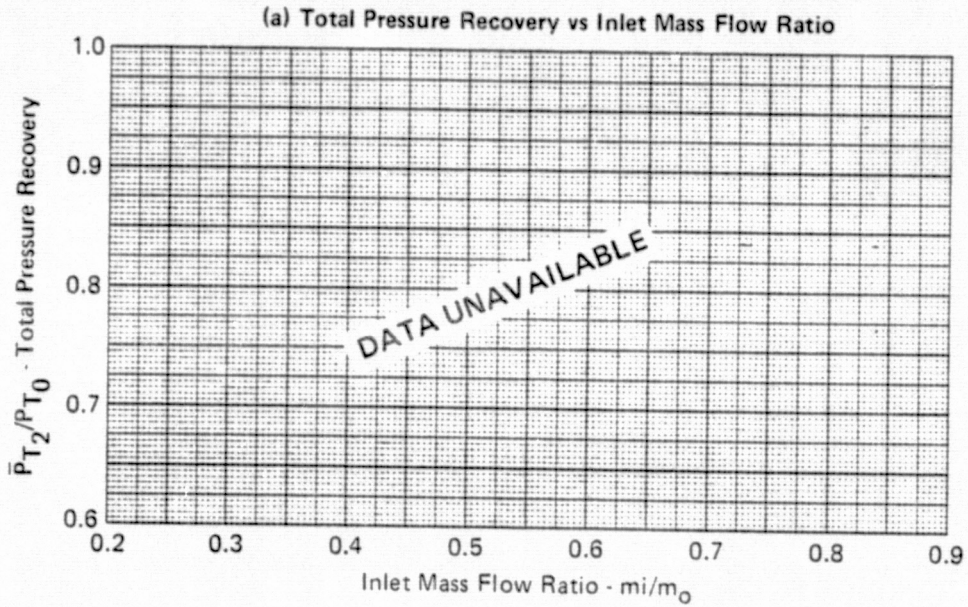
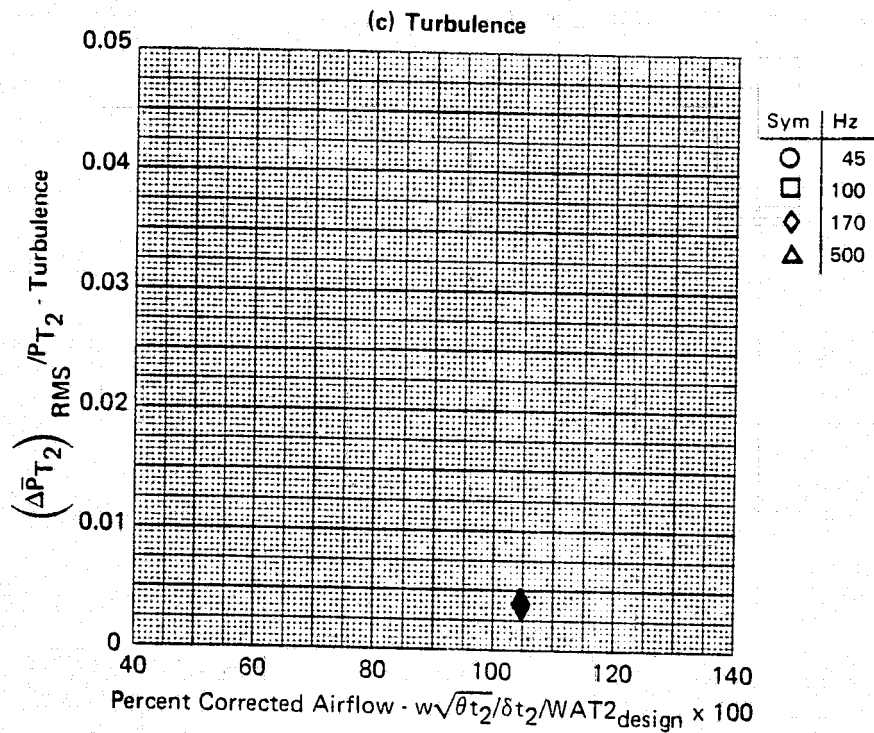


FIGURE G-22
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.93, \alpha = -3.3, \beta = 0.0, WAT2 = 104.8 \%$

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FLIGHT - NASA Data Study
 Part/Point - 425/3, Ident 22
 RHO DELTA3 BYPASS CIVV
 -1.2 8.6 0.0 -5.00

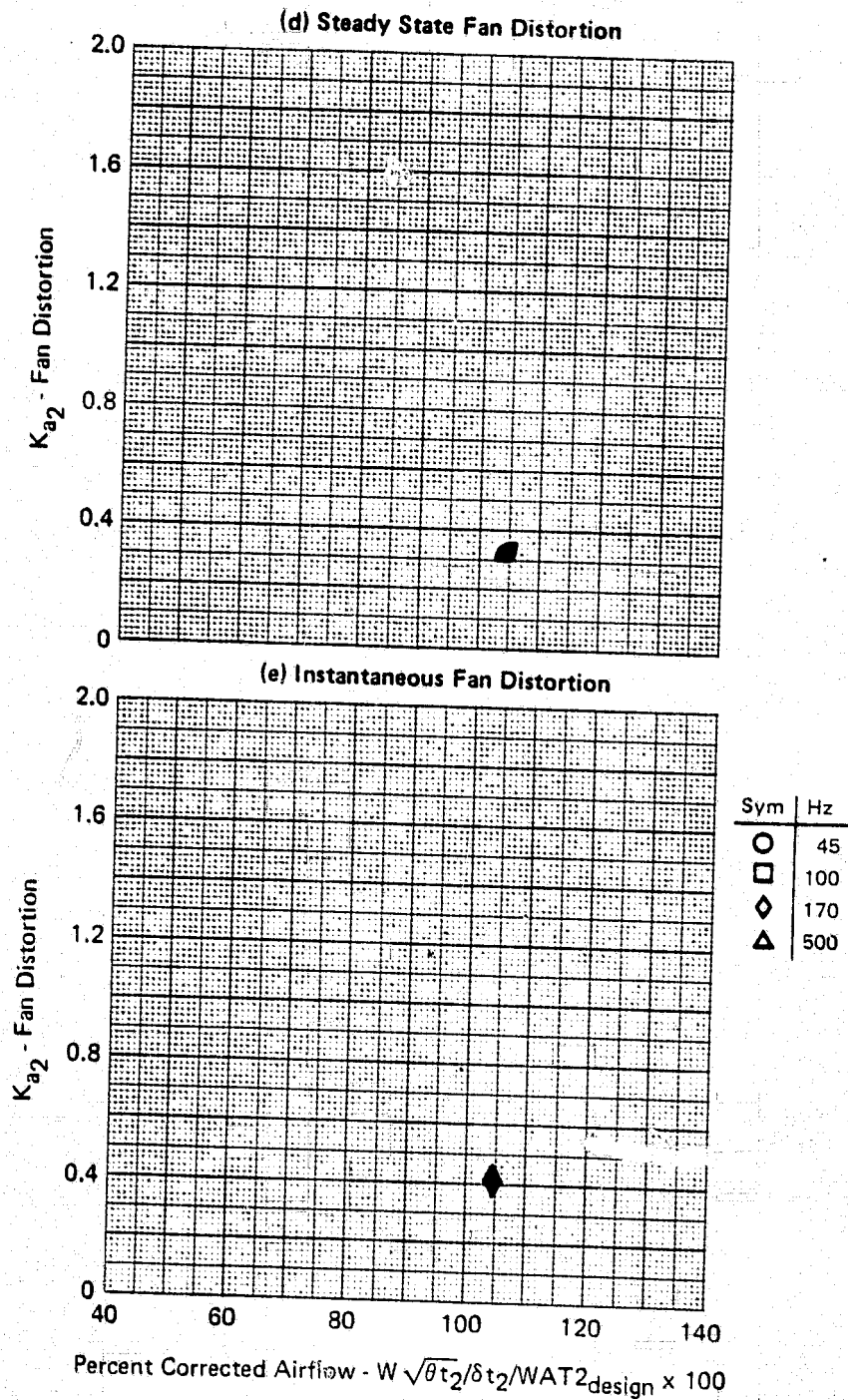


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FIGURE G-22 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.93$, $\alpha = -3.3$, $\beta = 0.0$, $WAT2 = 104.8\%$

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FLIGHT - NASA Data Study
 Part/Point - 425/3, Ident 22
 RHO DELTA3 BYPASS CIVV
 -1.2 8.6 0.0 -5.00



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FIGURE G-22 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.93$, $\alpha = -3.3$, $\beta = 0.0$, $WAT2 = 104.8\%$

FLIGHT - NASA Data Study
 Part/Point - 425/3, Ident 22
 RHO DELTA3 BYPASS CIVV
 -1.2 8.6 0.0 -5.00

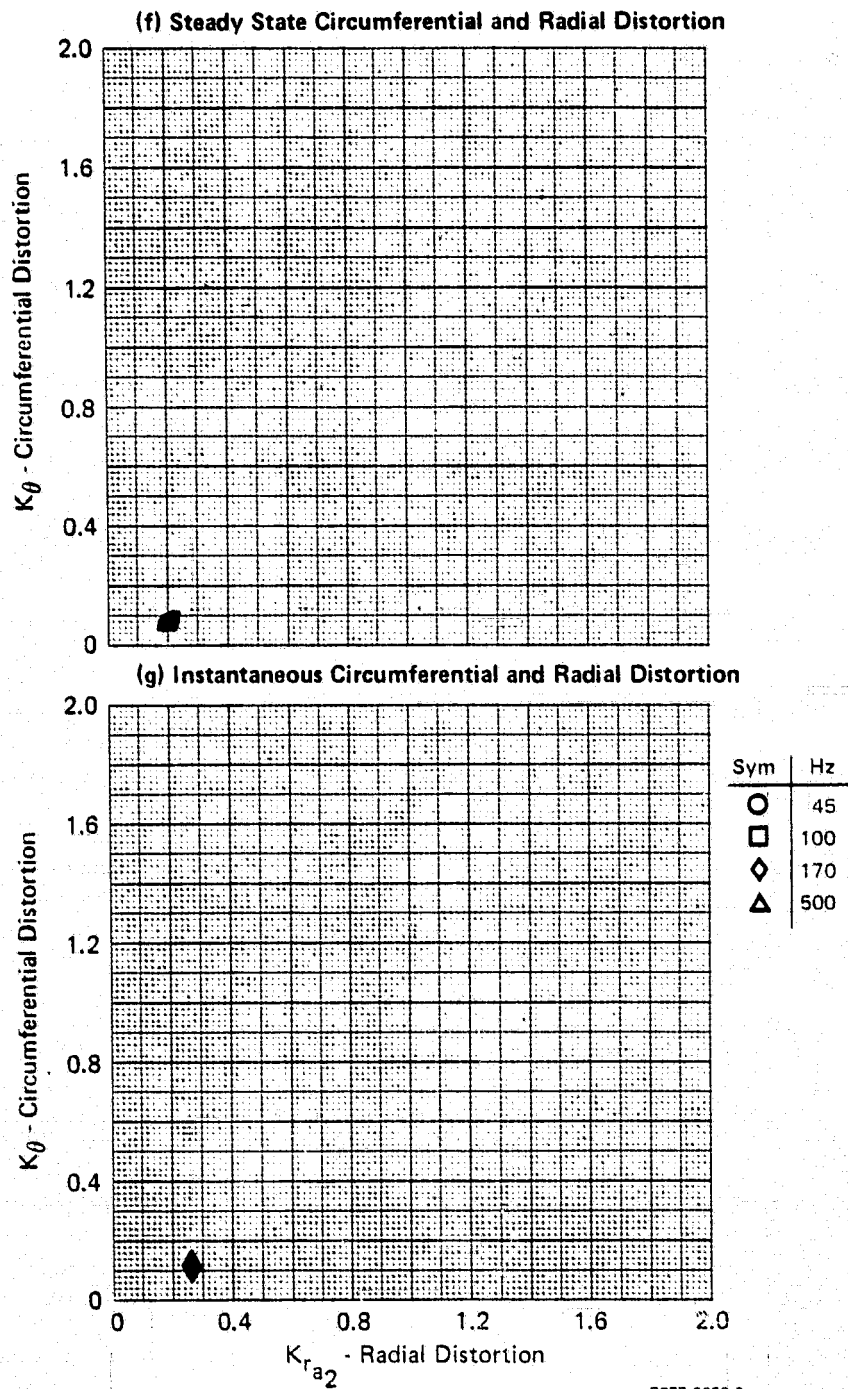
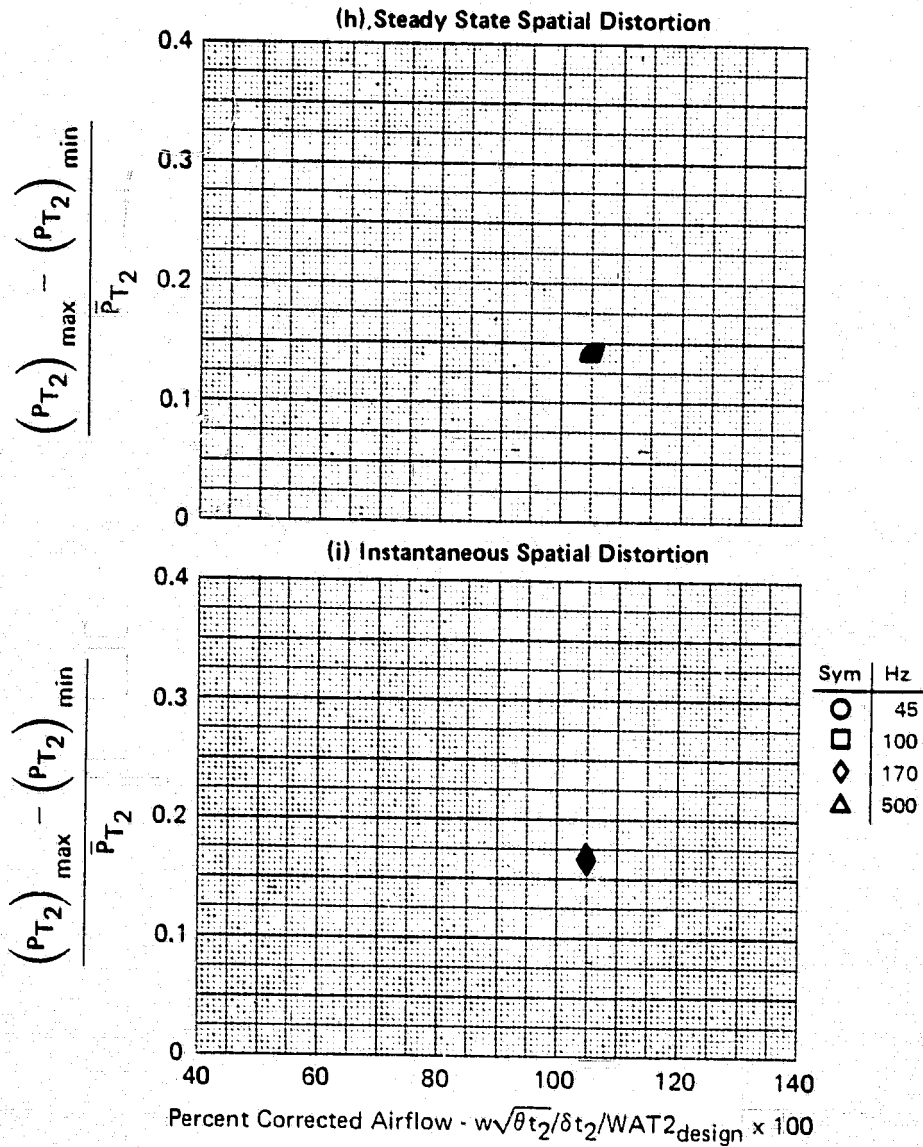


FIGURE G-22 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.93$, $\alpha = -3.3$, $\beta = 0.0$, WAT2 = 104.8 %

FLIGHT - NASA Data Study
 Part/Point - 425/3, Ident 22
 RHO DELTA3 BYPASS CIVV
 -1.2 8.6 0.0 -5.00



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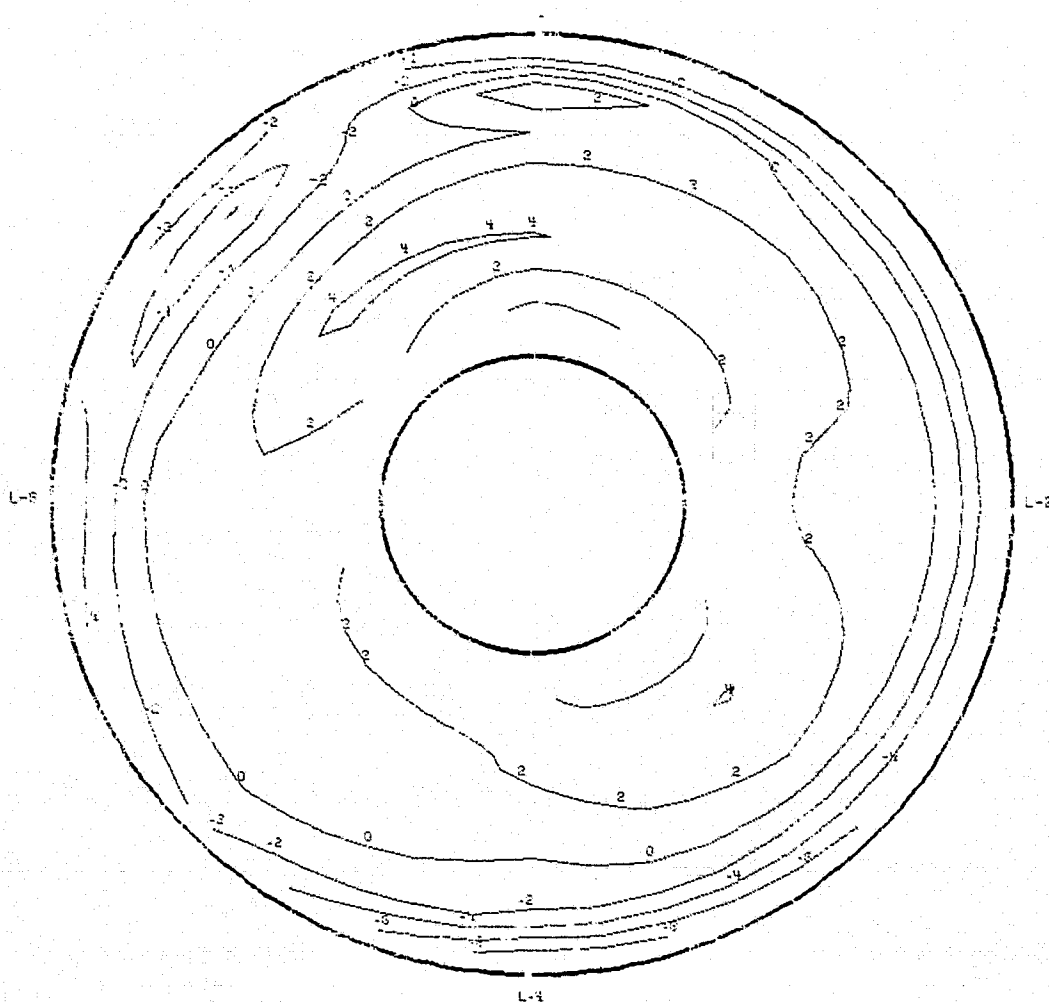
FIGURE G-22 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.93, \alpha = -3.3, \beta = 0.0, WAT2 = 104.8 \%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/3 IDENT. 22
THE SEGMENT START TIME WAS AT 05:14:24.644

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.93	-0.33	0.0	15405(50540)	-1.2	8.6	0.0	104.8%	-5.0
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	K0SP	D2
19.26(2.794)	1.0	0.714	0.2130	.2441	.3178	.0551	—	.1403

22 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 19.26 kPa (2.794 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

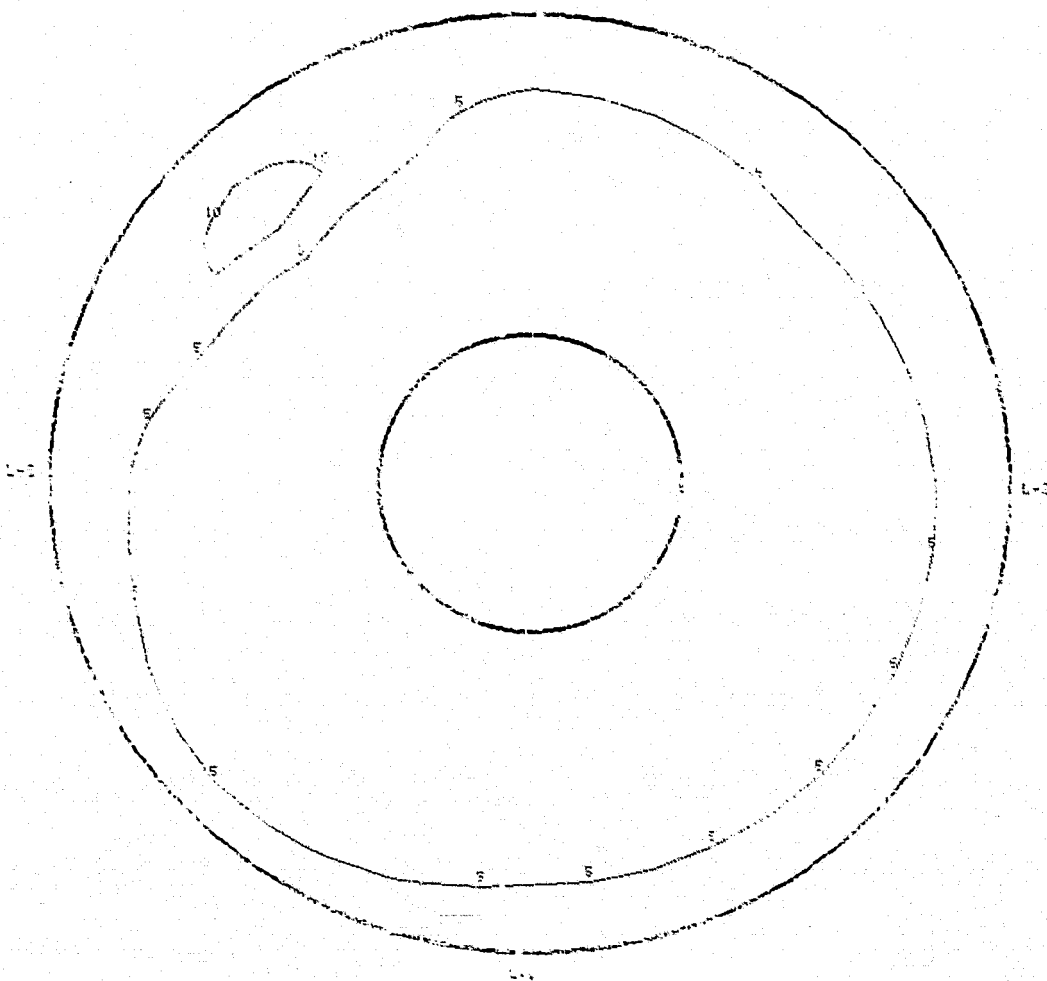
FIGURE G-22 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .93$, $\alpha = -.33$, $\beta = 0.0$, WAT2 = 104.8 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/3 IDENT. 22
THE SEGMENT START TIME WAS AT 05:14:24.644

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.93	-0.33	0.0	15405(50540)	-1.2	8.6	0.0	104.8%	-5.0

22(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0038

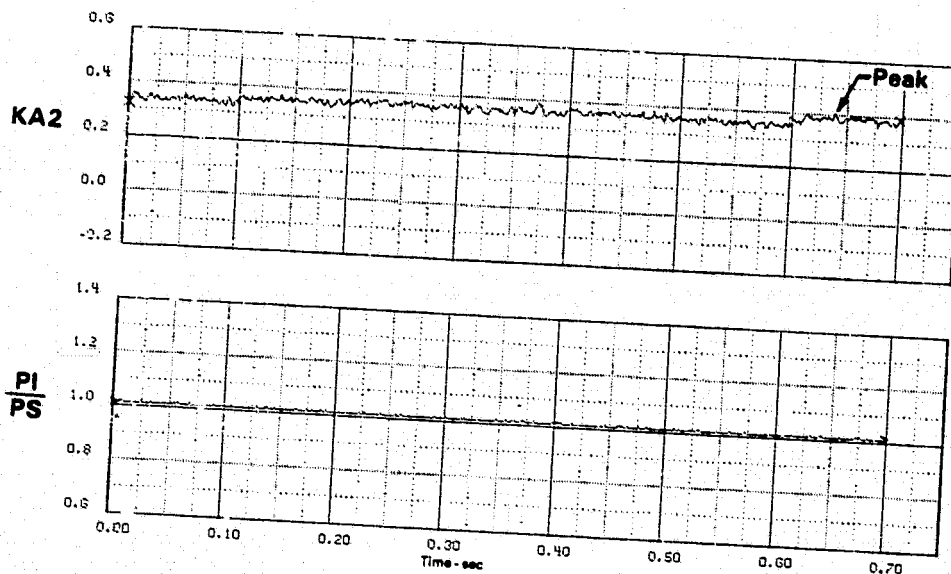
FIGURE G-22 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .93$, $\alpha = -.33$, $\beta = 0.0$, $WAT2 = 104.8\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/3 IDENT. 22
THE SEGMENT START TIME WAS AT 05:14:24.644

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.93	-0.33	0.0	15398(50517)	-1.2	8.6	0.0	104.8%	-5.0
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
19.51(2.83)	1.0129	0.1106	.2584	.2961	.4068	.1135	.1057	.1569

22(I) Time History Plots 170 Hz



PEAK AT TIME = 0.63909 SECONDS

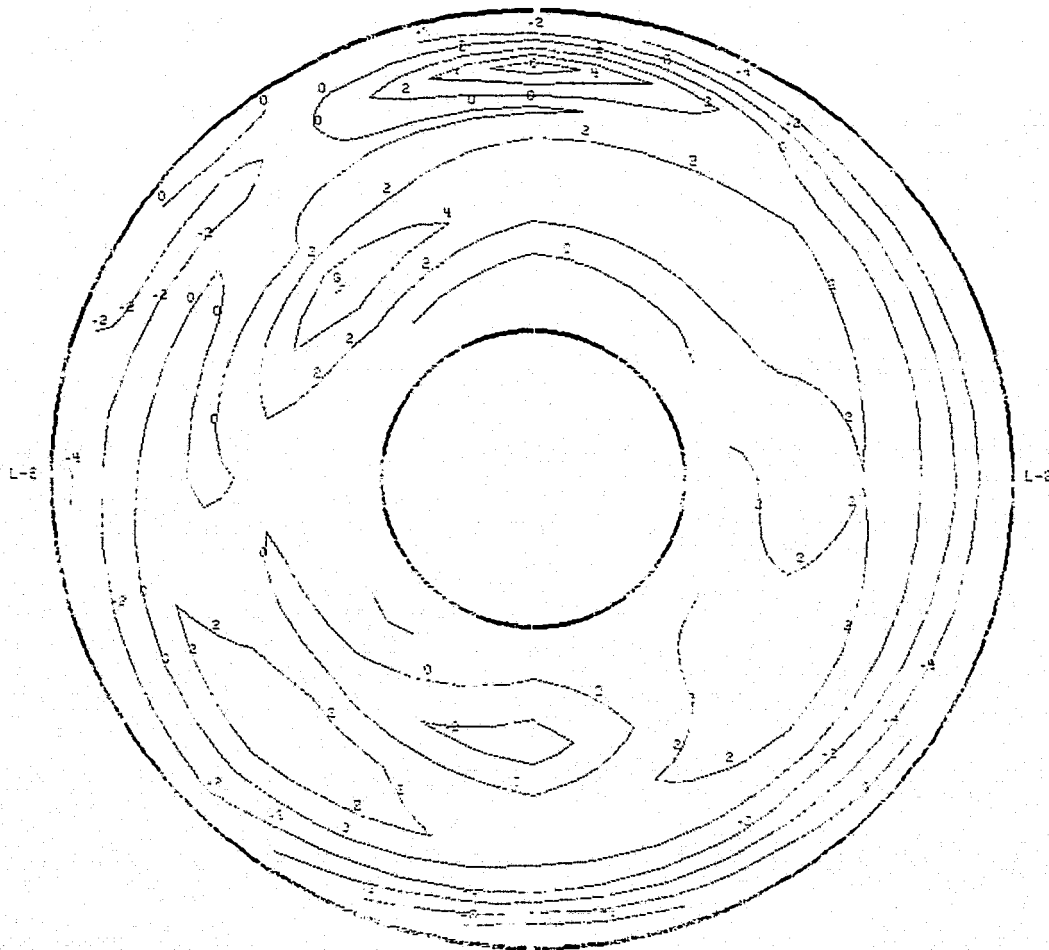
FIGURE G-22 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .93$, $\alpha = -.33$, $\beta = 0.0$, $WAT2 = 104.8\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/3 IDENT. 22
THE SEGMENT START TIME WAS AT 05:14:24.644

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.93	-0.33	0.0	15398(50517)	-1.2	8.6	0.0	104.8%	-5.0
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
19.51(2.83)	1.0129	0.1106	.2584	.2961	.4068	.1135	.1057	.1669

22(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 19.51 kPa (2.830 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.63909 SECONDS

FIGURE G-22 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .93$, $\alpha = -.33$, $\beta = 0.0$, WAT2 = 104.8 %

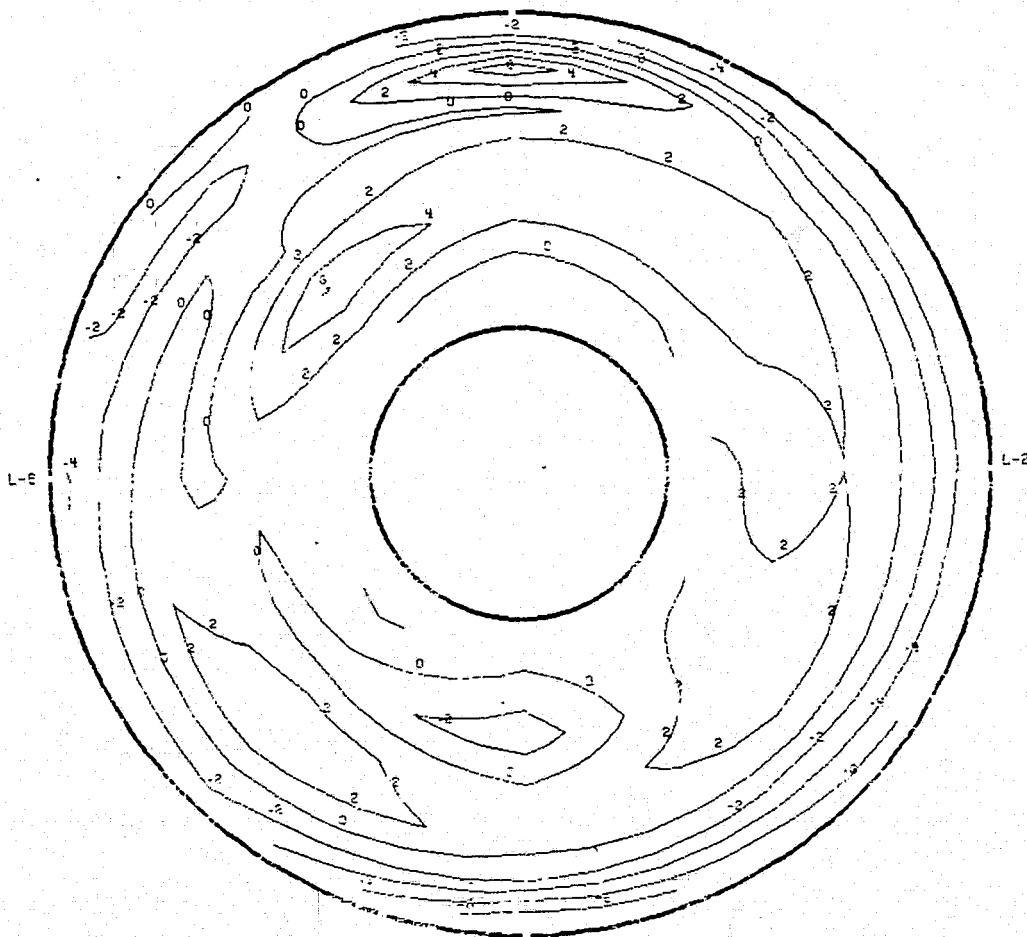
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/3 IDENT. 22
THE SEGMENT START TIME WAS AT 05:14:24.644

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.93	-0.33	0.0	15398(50517)	-1.2	8.6	0.0	104.8%	-5.0
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
19.51(2.83)	1.0129	0.1106	.2584	.2961	.4068	.1135	.1057	.1669

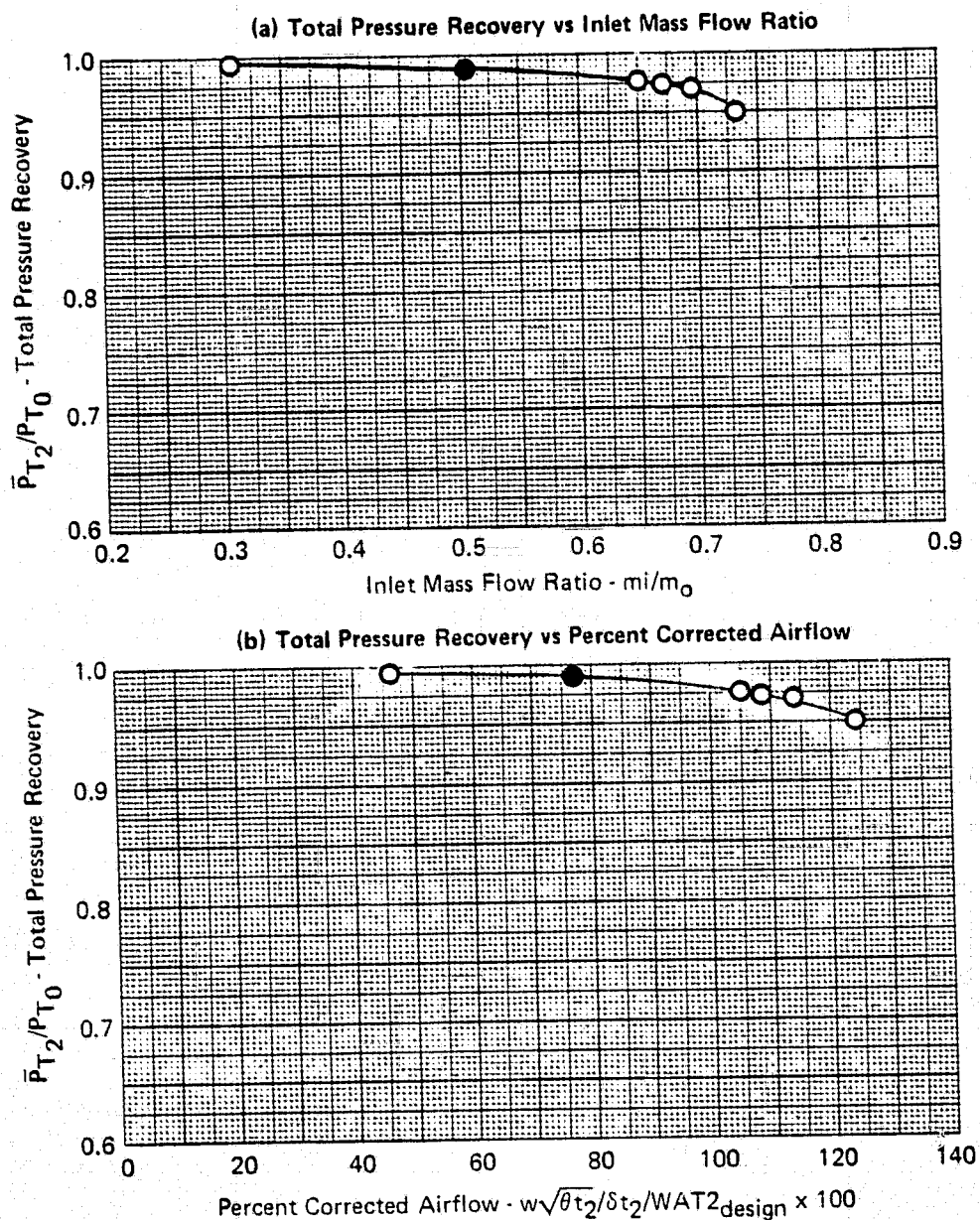
22(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 19.51 kPa (2.830 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.63909 SECONDS

FIGURE G-22 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .93$, $\alpha = -.33$, $\beta = 0.0$, WAT2 = 104.8 %

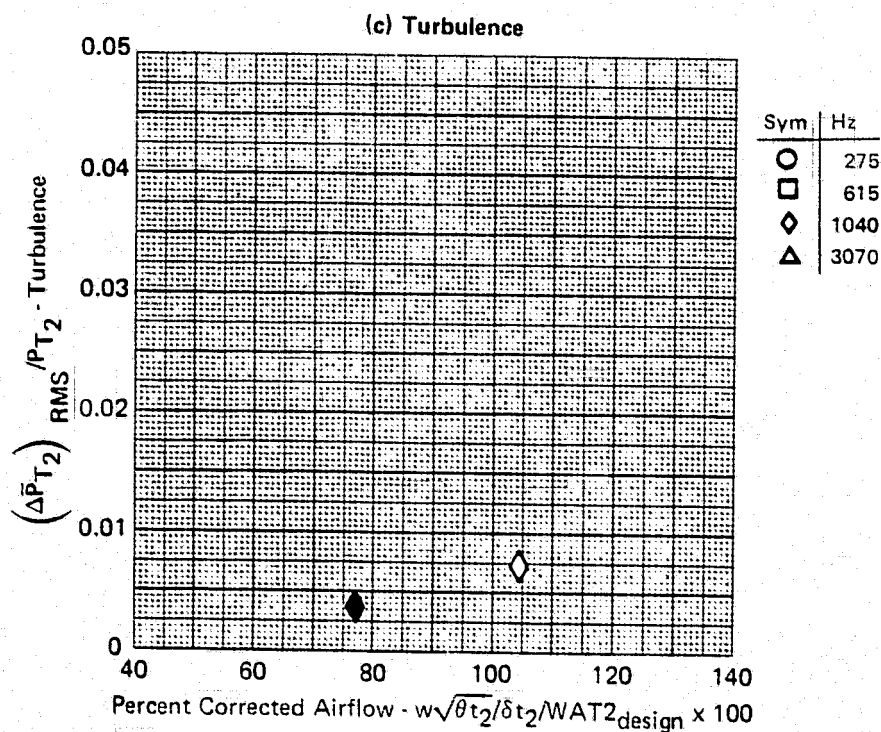
SERIES VII - NASA Data Study
 Part/Point - 67/9, Ident 23
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -25.00



GP77-0658-1

FIGURE G-23
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 76.8\%$

SERIES VII - NASA Data Study
 Part/Point - 67/9, Ident 23
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -25.00

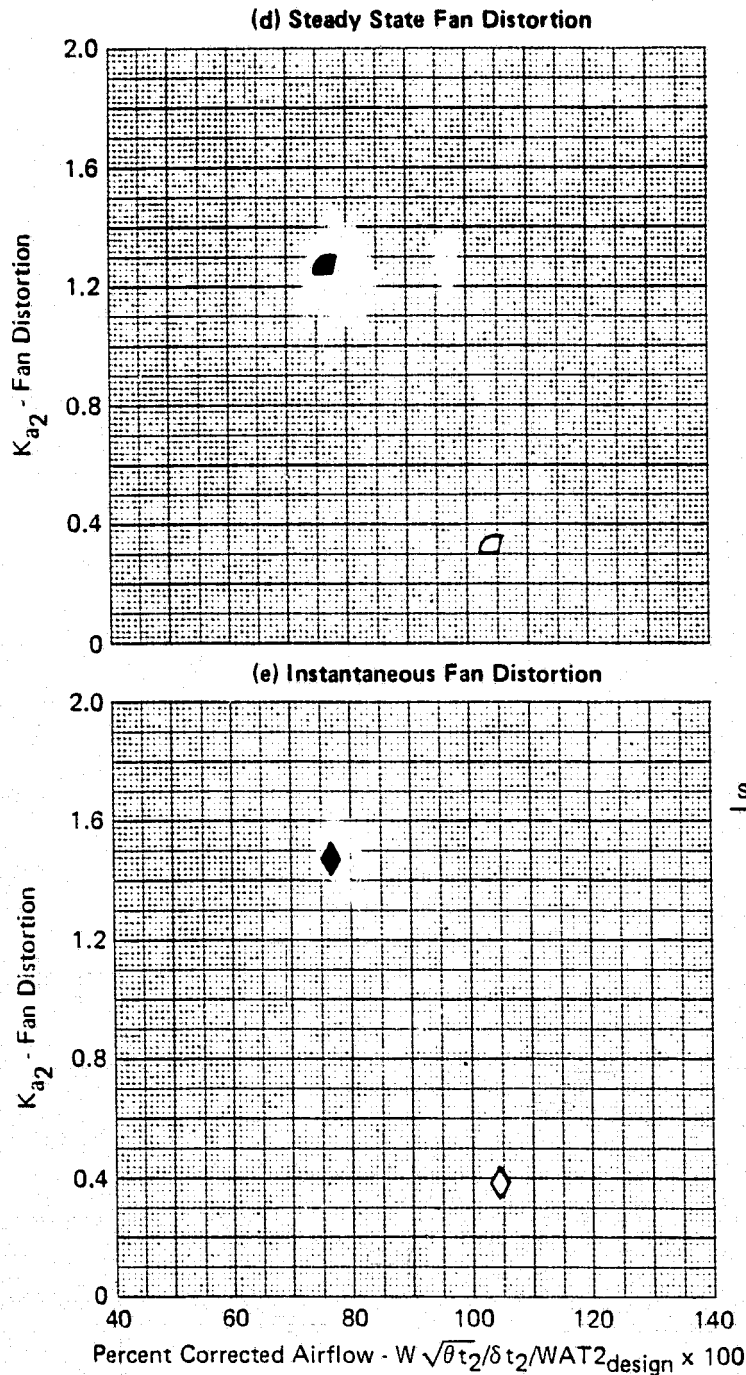


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FIGURE G-23 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 76.8\%$

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SERIES VII - NASA Data Study
 Part/Point - 67/9, Ident 23
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -25.00



GP77-0658 3

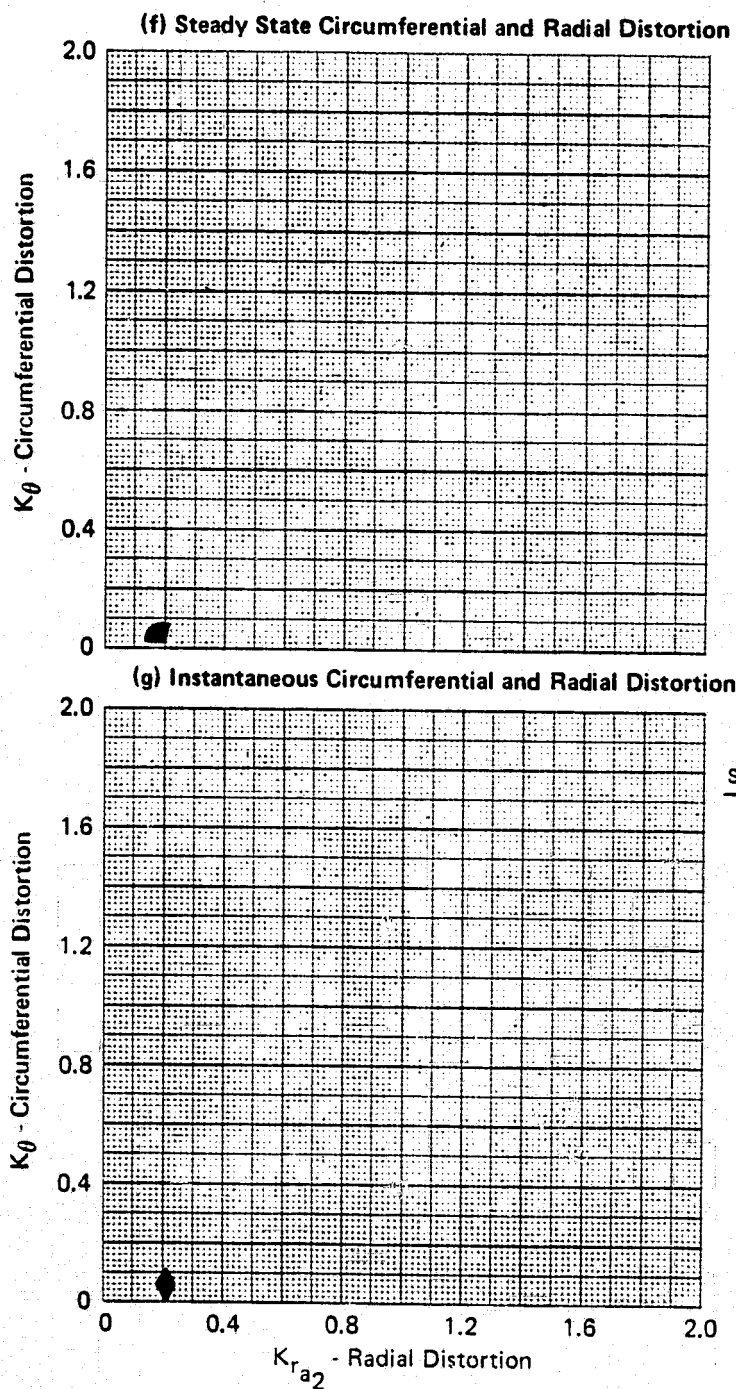
FIGURE G-23 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = 4.0, \beta = 0.0, WAT2 = 76.8 \%$

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SERIES VII - NASA Data Study

Part/Point - 67/9, Ident 23

RHO	DELTA3	BYPASS	CIVV
7.0	10.6	0.0	-25.00

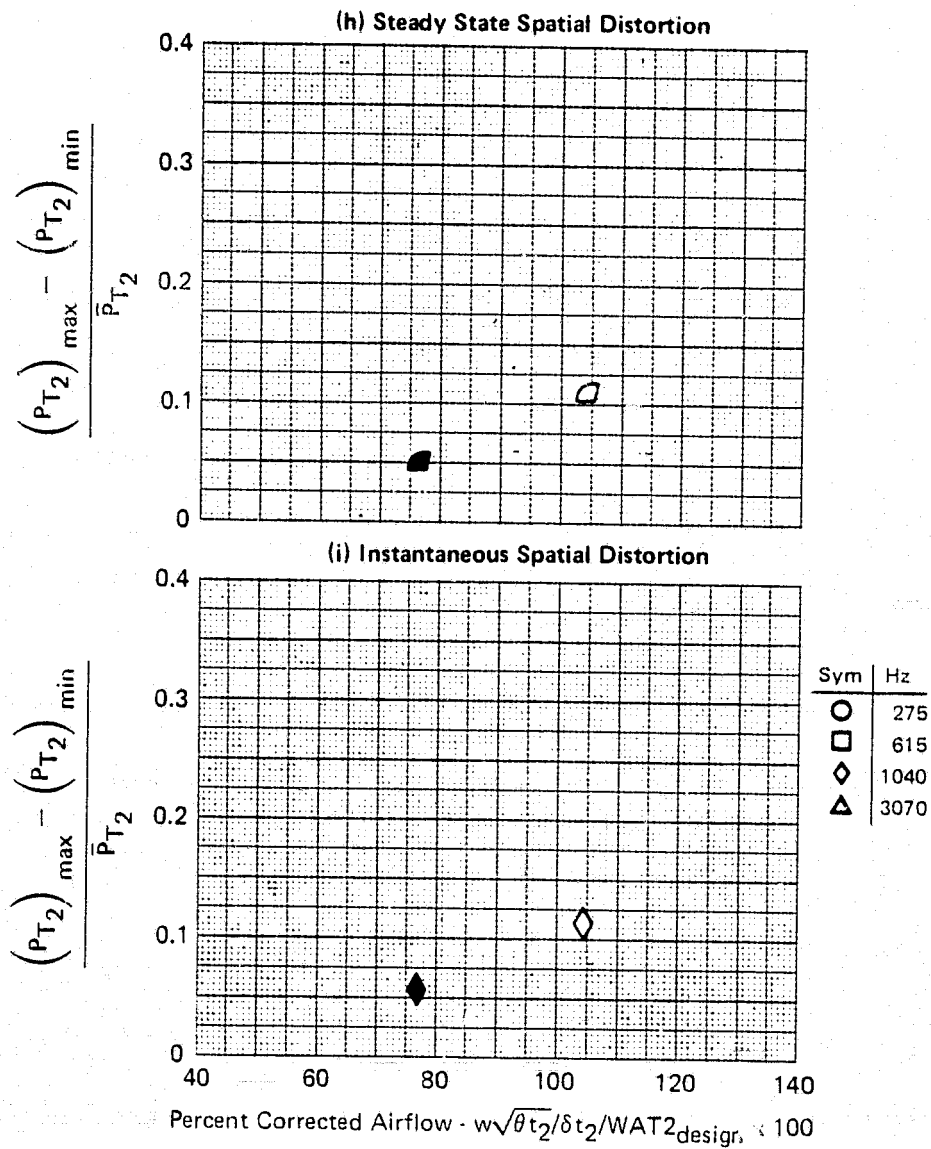


GP77-0658-2

FIGURE G-23 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 76.8 %

SERIES VII - NASA Data Study
Part/Point - 67/9, Ident 23

RHO DELTA3 BYPASS CIVV
7.0 10.6 0.0 -25.00



GP77-0658-4

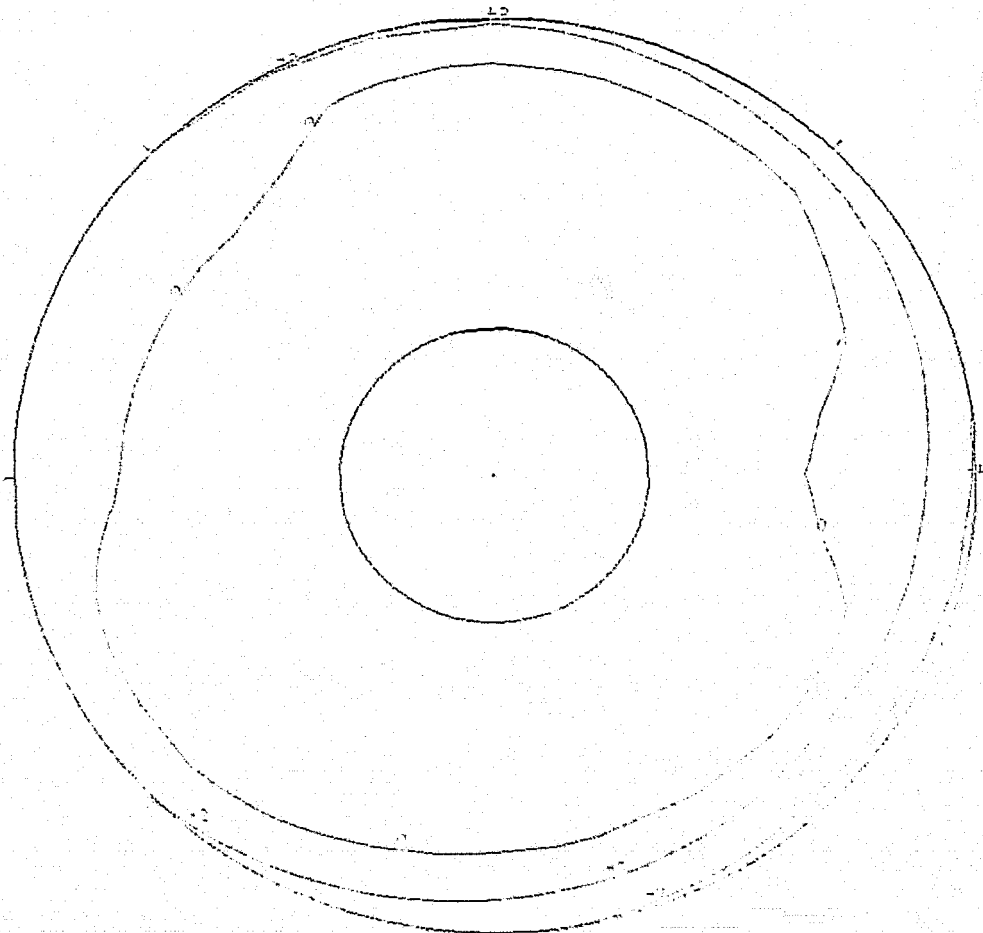
FIGURE G-23 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90, \alpha = 4.0, \beta = 0.0, WAT2 = 76.8\%$

SERIES VII - NASA DATA STUDY

DATA PART/PRINT 67 / 3 IDENT. 23
THE SEGMENT START TIME WAS AT 5: 5:15.274

MACH	ALPHA	BETA	BH0	DELTA2	ENRACS	WAT2	CIVV
0.9	4.0	0.0	7.0	19.6	0.0	75.8%	-25.0
P1	P1/P3	KTHETA	KAP2	ENRAC2	N22	K02	KESP
50.92 (7.385)	1.000	0.040	0.000	0.000	1.282	0.006	0.015
							O2
							0.043

23(I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 50.92 kPa (7.385 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-23 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 75.8$ %

SERIES VII - NOISE DATA STUDY

DATA POINTS AT 100 HZ IDENT. 23
 THE SEGMENT START TIME WAS 01 51.5.274

NOISE
 0.9

ALPHA
 4.0

BETA
 0.0

WAT2
 76.8

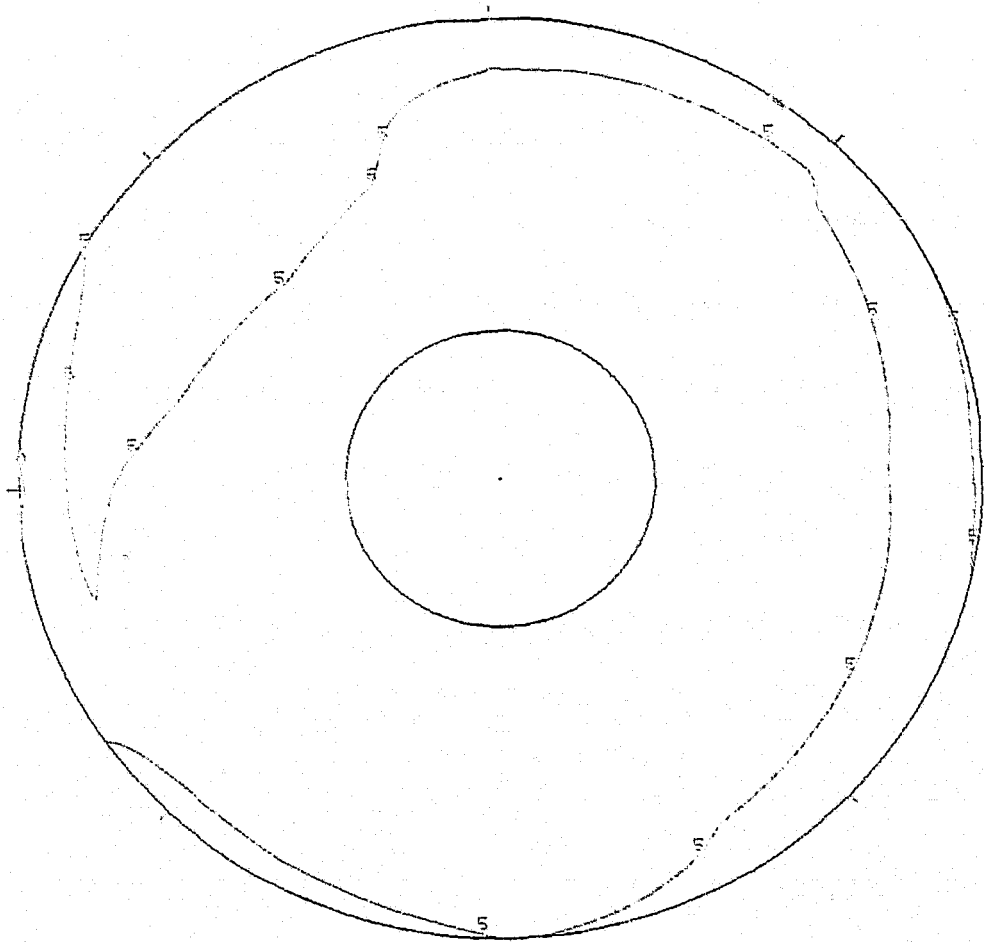
WAT2
 76.8

WAT2
 76.8

WAT2
 76.8

WAT2
 76.8

23(k) Turbulence Contour 1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
 AVERAGE TURBULENCE = .00377

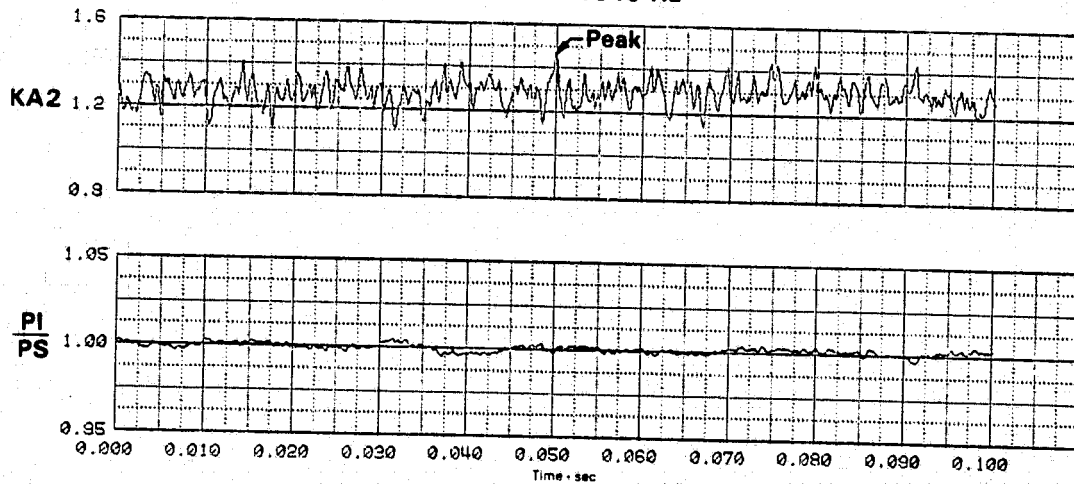
FIGURE G-23 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 76.8 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 67 / 0 IDENT. 23
THE SEGMENT START TIME WAS AT 5: 5.15.274

MACH 0.9	ALPHA 4	BETA 0	PHI 7.0	DELTA3 10.6	BYPASS 0.0	WAT2 76.3%	C1VV -25.0
PT 50.84 (7.373)	PI/PS 0.970	KTHETA 0.046	KPA2 0.211	PKA2 1.432	KAS 1.472	KCS 0.000	KCSF 0.020
							D2 0.056

23(I) Time History Plots 1040 Hz



PEAK AT TIME = 0.049995 SECONDS

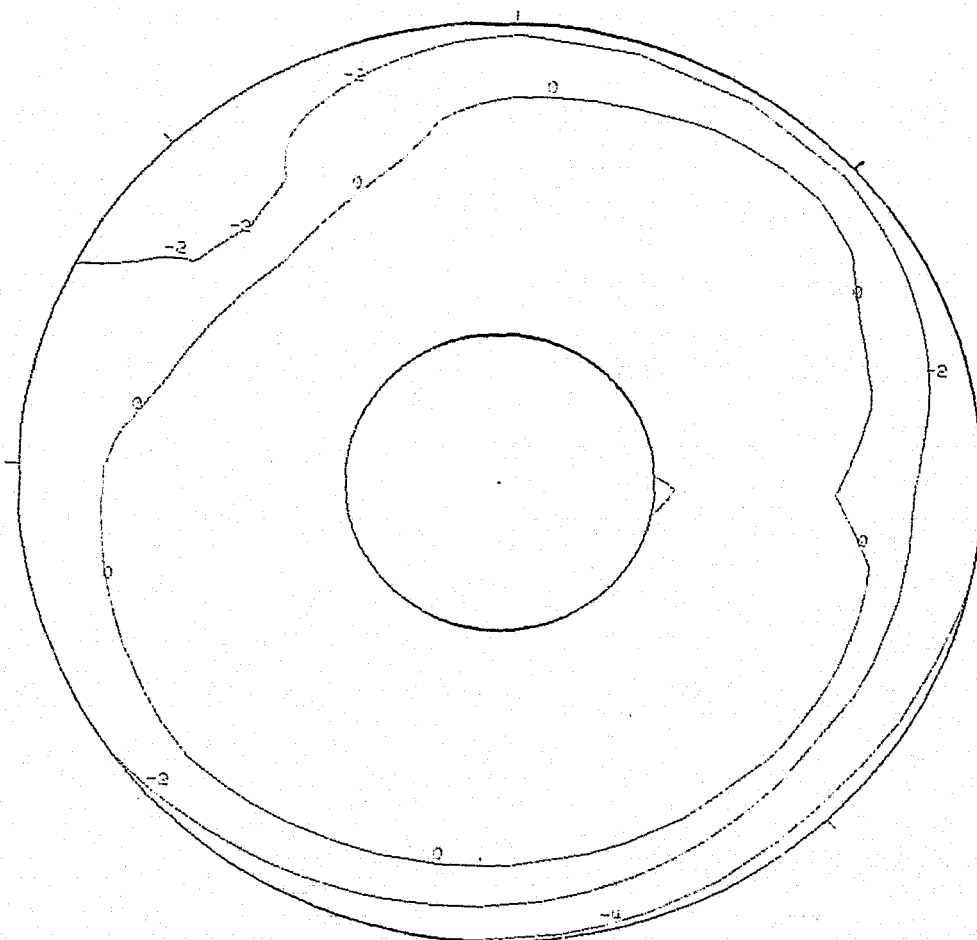
FIGURE G-23 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 76.8 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 67 / 3 IDENT. 23
THE SEGMENT START TIME WAS AT 5: 5:15.274

MACH	ALPHA	BETA	PHI	DELTA2	BYPASS	WAT2	QIVV	
0.9	4	3	7.0	13.6	0.0	76.8%	-25.0	
P1	P1/PS	KTHETA	KPQ2	BKRA2	KQ2	KC2	KOSP	D2
50.84 (7.373)	0.933	3.345	0.211	1.432	1.373	0.040	0.020	0.056

**23(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
1040 Hz**



MEAN FACE PRESSURE = 50.84 kPa (7.373 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.049995 SECONDS

FIGURE G-23 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.9$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 76.8\%$

SERIES VII - NASA Data Study
 Part/Point - 67/7, Ident 24
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -5.00

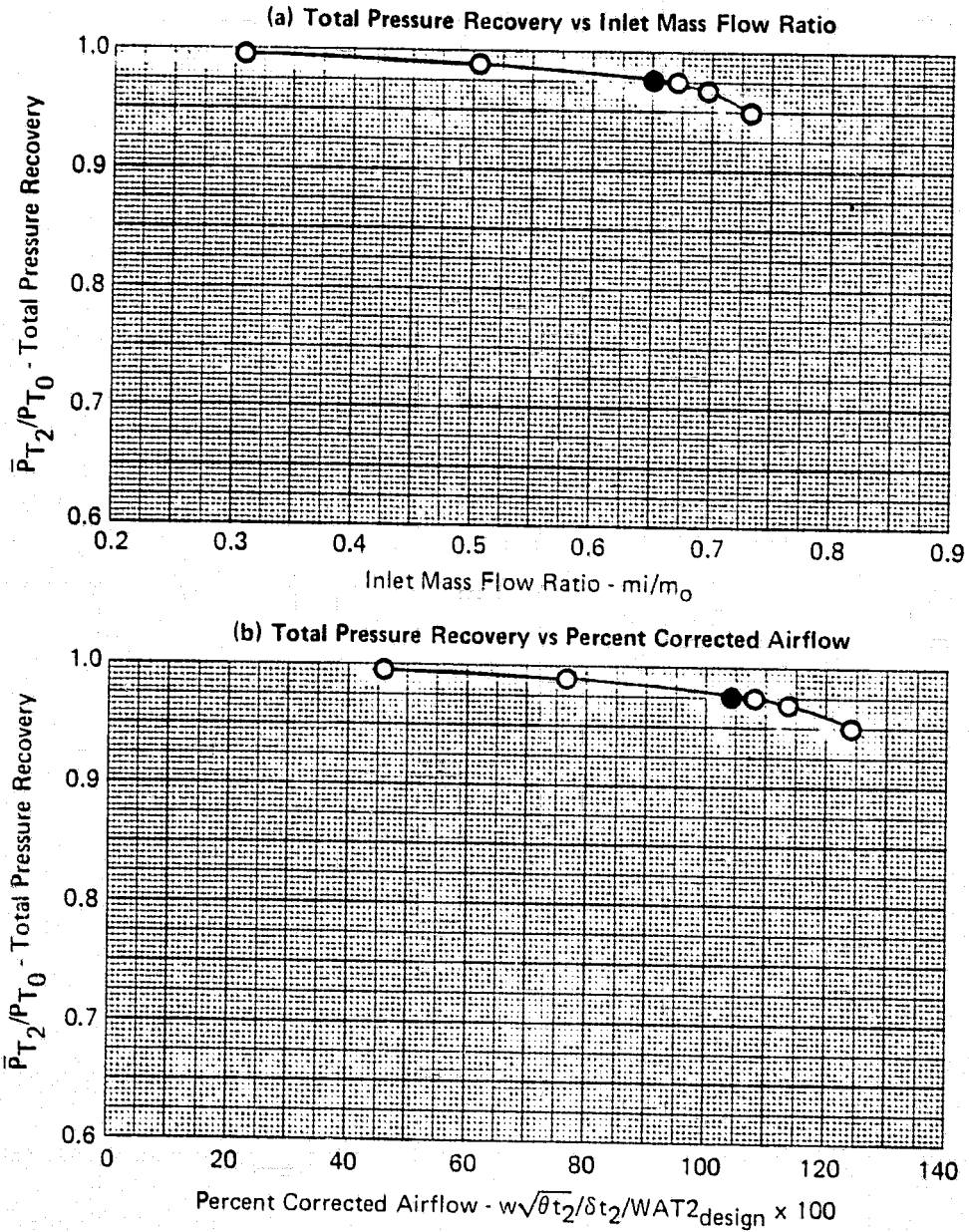
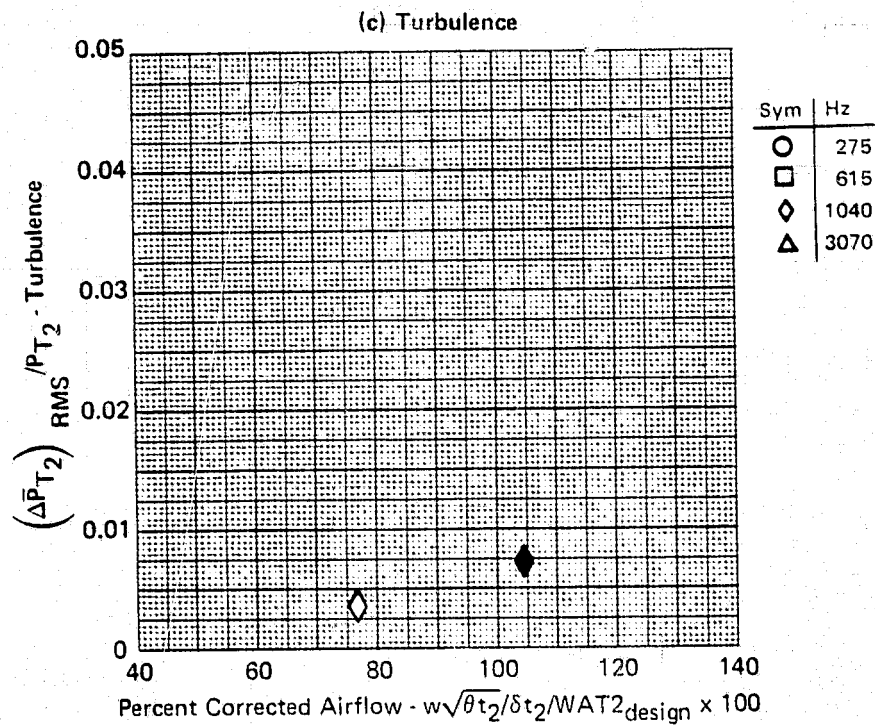


FIGURE G-24
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 104.3\%$

GP77-0658-1

SERIES VII - NASA Data Study
 Part/Point - 67/7, Ident 24
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -5.00



GP77-0658-5

FIGURE G-24 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 104.3\%$

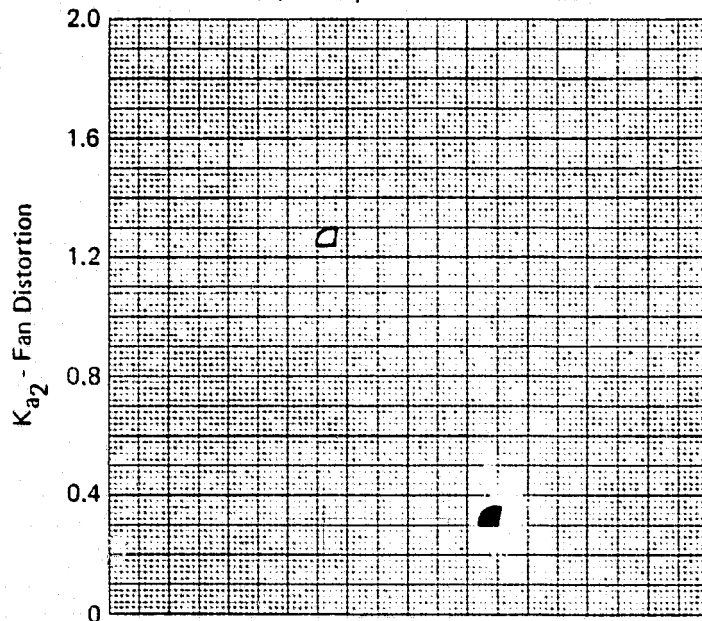
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 OF POOR QUALITY.

SERIES VII - NASA Data Study

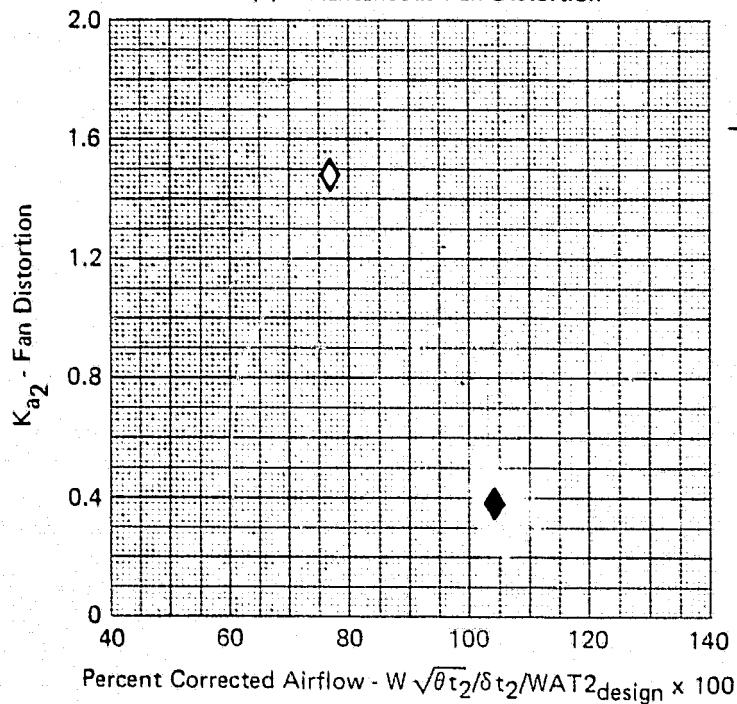
Part/Point - 67/7, Ident 24

RHO DELTA3 BYPASS CIVV
7.0 10.6 0.0 -5.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion



Sym	Hz
○	275
□	615
◇	1040
△	3070

GP77-0658-3

FIGURE G-24 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 104.3$ %

SERIES VII - NASA Data Study
 Part/Point - 67/7, Ident 24
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -5.00

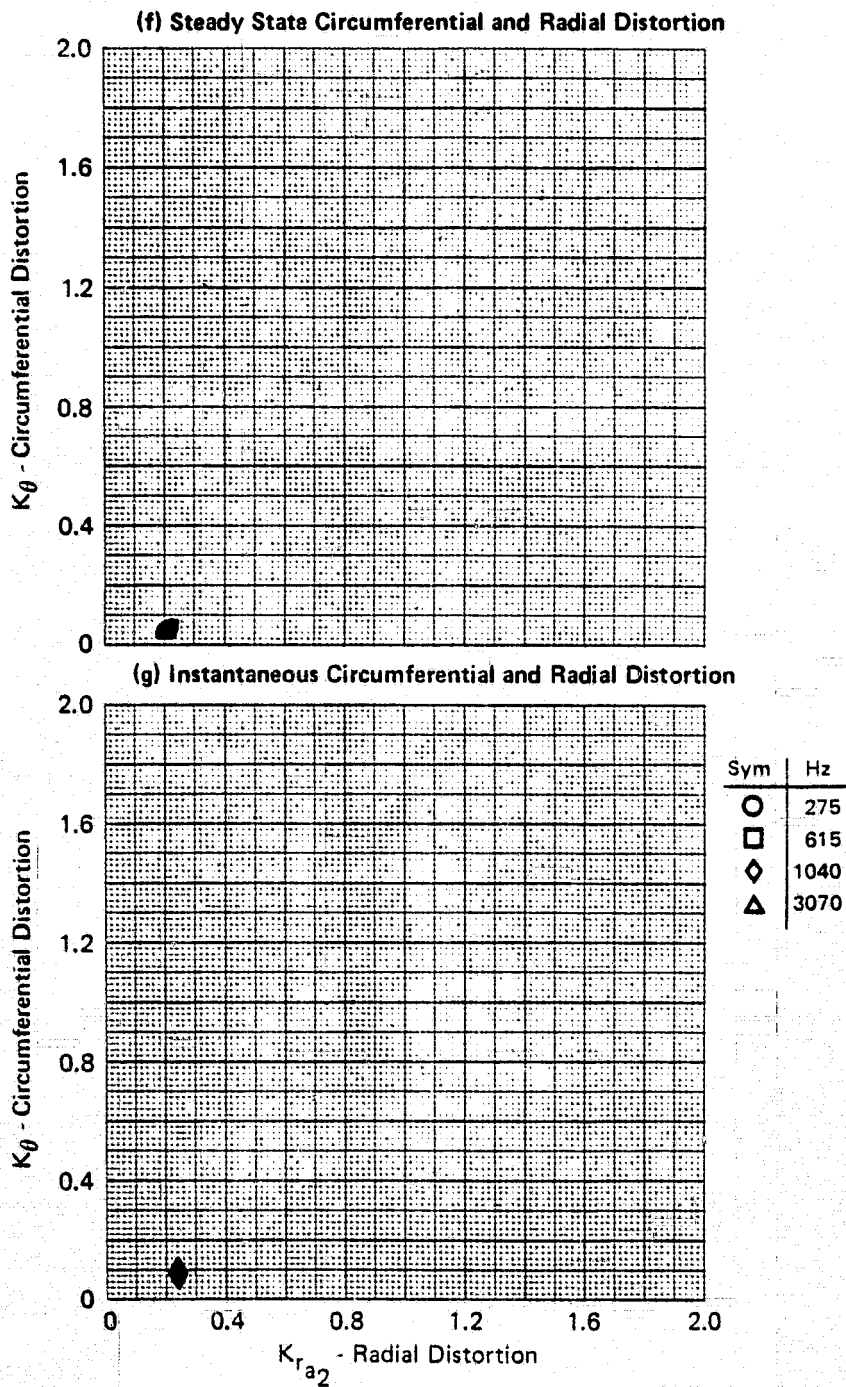


FIGURE G-24 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 104.3 %

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 OF POOR QUALITY

SERIES VII - NASA Data Study
 Part/Point - 67/7, Ident 24
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -5.00

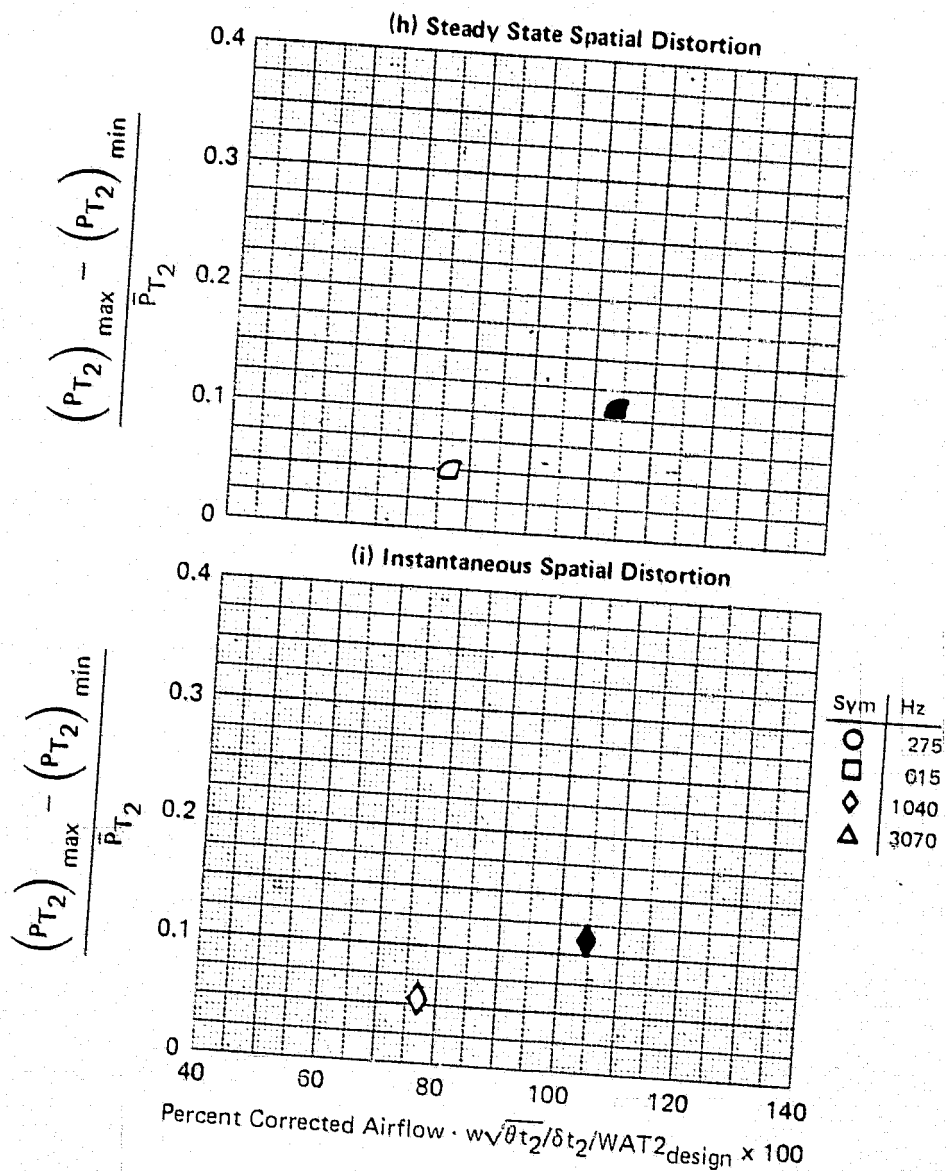


FIGURE G-24 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 104.3\%$

GP77-0658-4

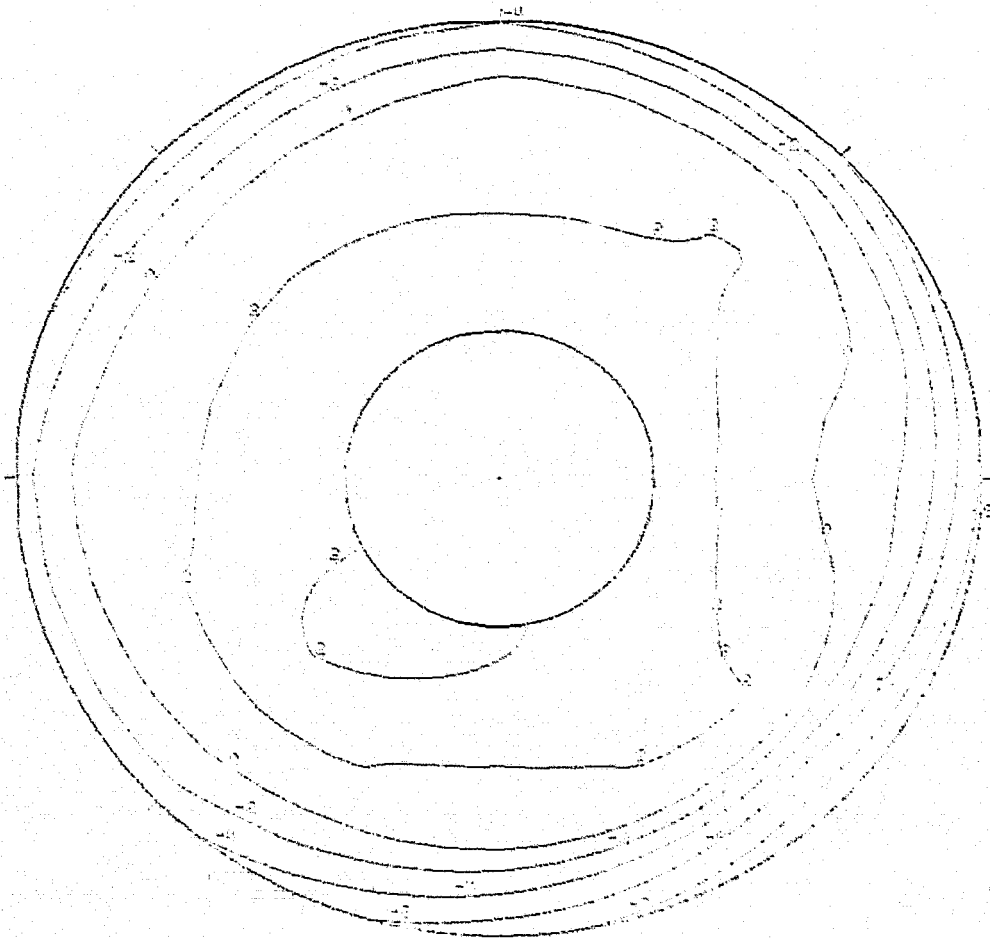
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 OF POOR QUALITY

SERIES VII - NASA DATA STUDY

DATA PART/POINT 67 / 7 IDENT. **24**
 THE SEGMENT START TIME WAS AT 5: 3:20.052

MACH 2.3	ALPHA 4	BETA 0	SHO 7.3	DELTA3 18.6	BYPASS 0.0	WAT2 104.3%	CIVV -5.0
PT 50.38 (7.307)	P1/PS 1.033	WTHETA 0.051	KPA2 0.222	BKPA2 0.120	W02 0.021	N02 0.022	WASP 0.017
							O2 0.193

24 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 50.38 kPa (7.307 PSIA)
 NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
 FROM MEAN FACE PRESSURE.

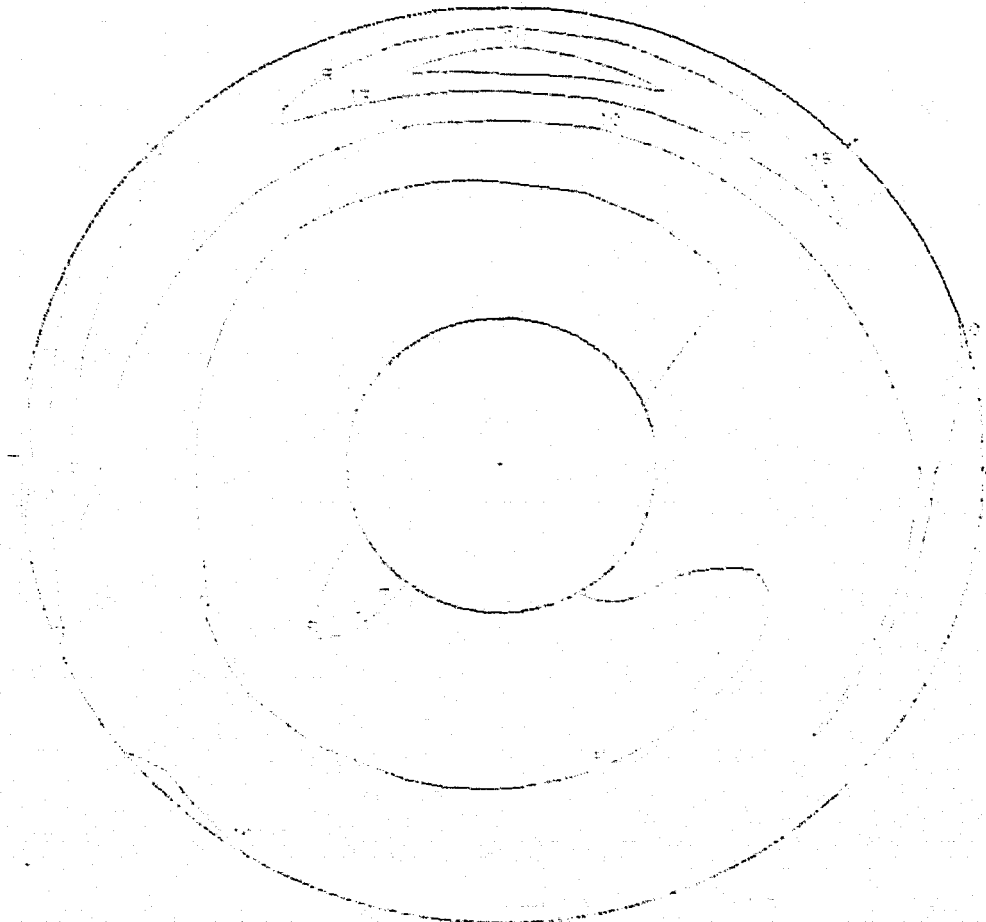
FIGURE G-24 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 104.3\%$

SERIES VII - NASA DATA STUDY

DATA POINTS 57 / 7 ISSUE 24
THE RECORD START TIME WAS AT 5- 3:20.052

MOCH	ALPHA	BETA	WAT2	WAT3	WAT4	WAT5	WAT6
10.1							104.3%
							25.0

**24(k) Turbulence Contour
1040 Hz**



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00732

FIGURE G-24 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 104.3 %

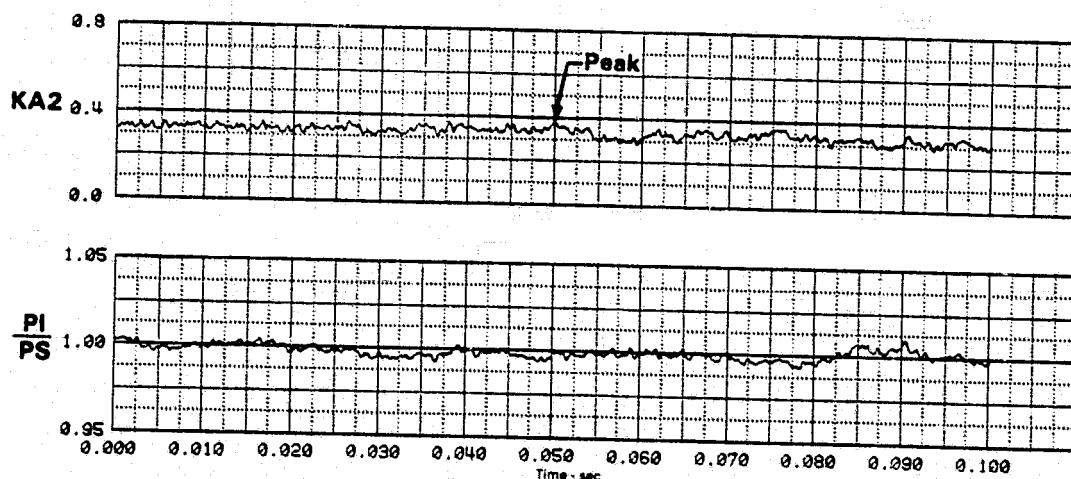
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OF POOR QUALITY

SERIES VII - NASA DATA STUDY

DATA PART/POINT 67 / 7 IDENT. 24
THE SEGMENT START TIME WAS AT 0: 3:20.052

MACH 0.9	ALPHA 4	BETA 0	PHI 7.0	DELTA3 10.6	BYPASS 0.0	WAT2 104.3%	CIVV -5.0
D1 50.28 (7.293)	PI/PS 0.995	KTHETA 0.002	KPA2 0.239	BKPA2 0.239	KP2 0.331	KC2 0.050	D2 0.113

24(I) Time History Plots
1040 Hz



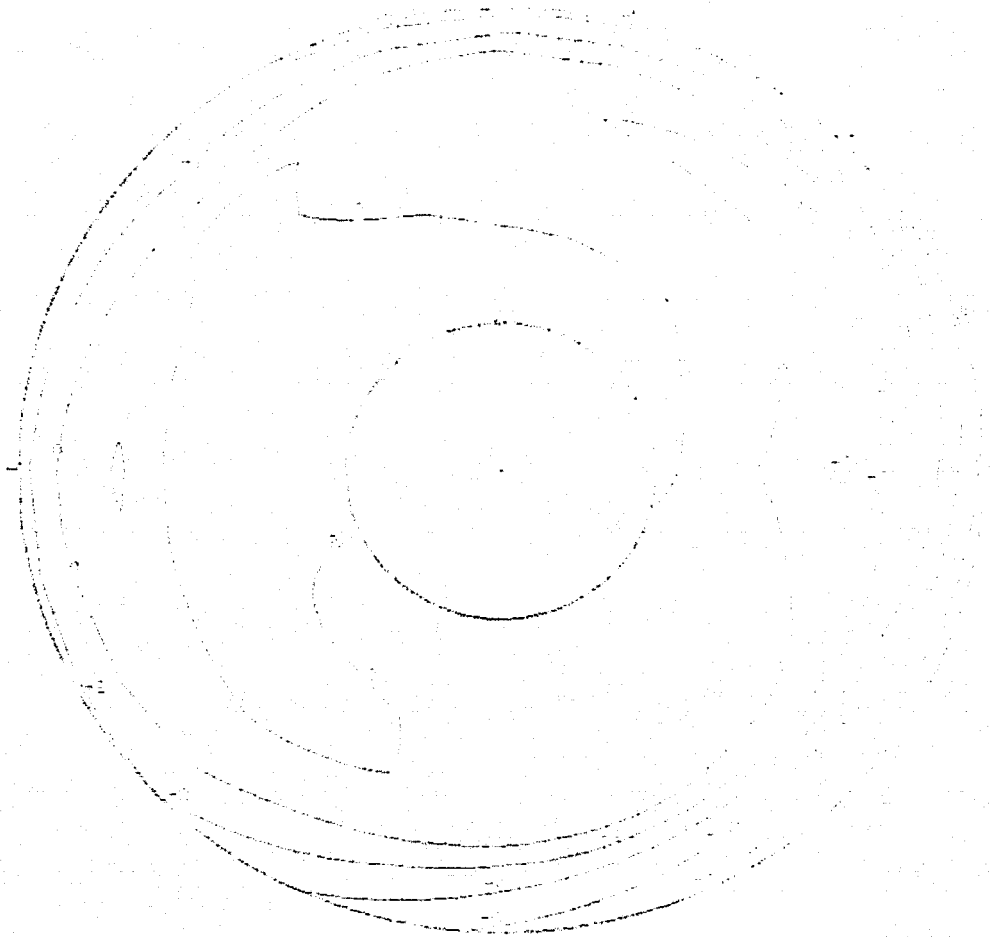
PEAK AT TIME = 0.049995 SECONDS

FIGURE G-24 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 104.3\%$

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50.28 (7.293)

**24(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
1040 Hz**



MEAN FACE PRESSURE = 50.28 kPa (7.293 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.049995 SECONDS

**FIGURE G-24 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 104.3 %**

FSE NASA Data Study
 Part/Point - 126/2, Ident 25
 RHO DELTA3 BYPASS CIVV
 7.3 10.4 0.0 -11.00

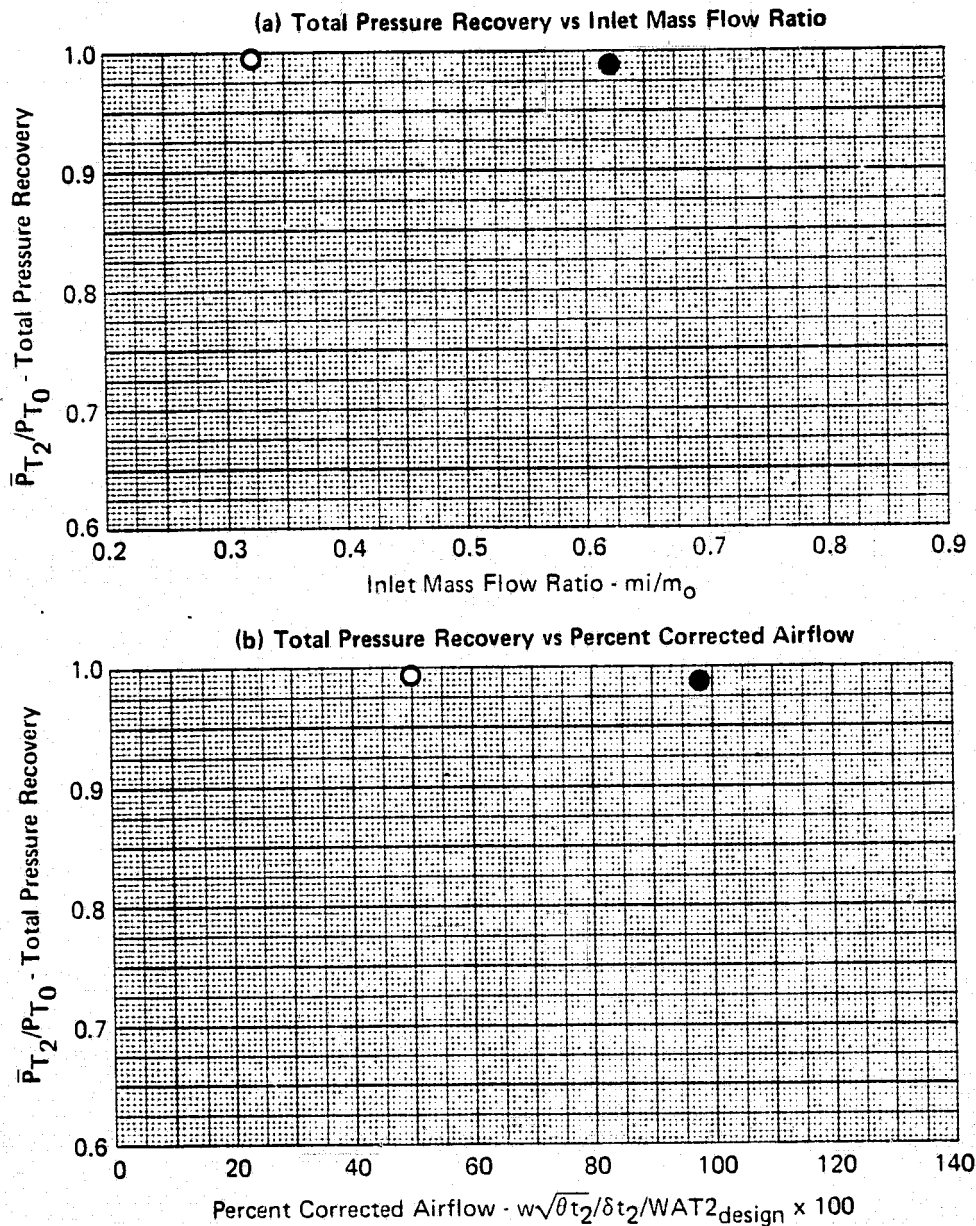
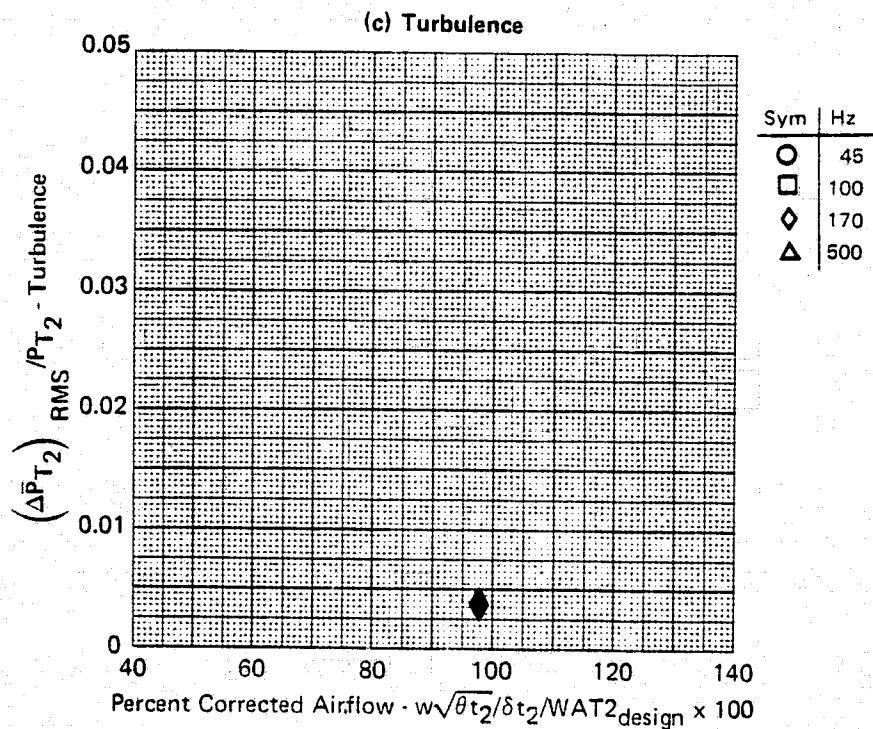


FIGURE C 25
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = 4.0, \beta = 0.0, WAT2 = 97.7 \%$

GP77-0658-1

C. H.

FSE - NASA Data Study
 Part/Point - 126/2, Ident 25
 RHO DELTA3 BYPASS CIVV
 7.3 10.4 0.0 -11.00

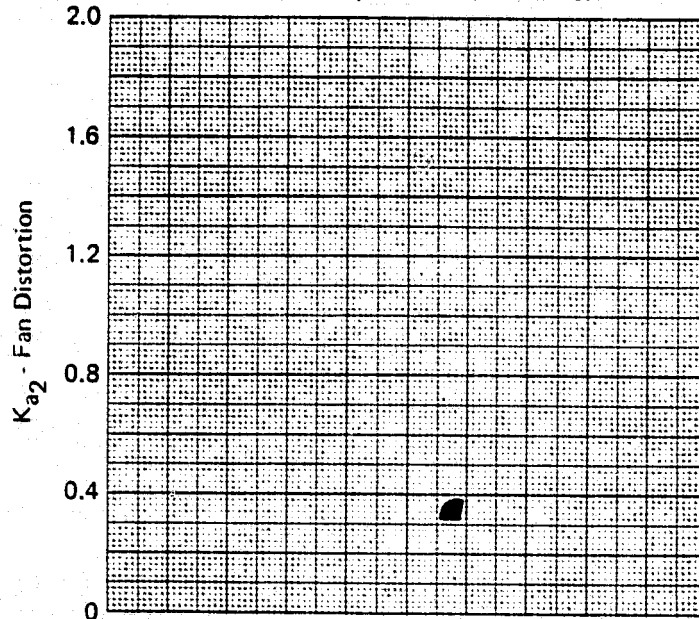


GP77-0658-5

FIGURE G-25 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90, \alpha = 4.0, \beta = 0.0, WAT2 = 97.7\%$

FSE - NASA Data Study
 Part/Point - 126/2, Ident 25
 RHO DELTA3 BYPASS CIVV
 7.3 10.4 0.0 -11.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion

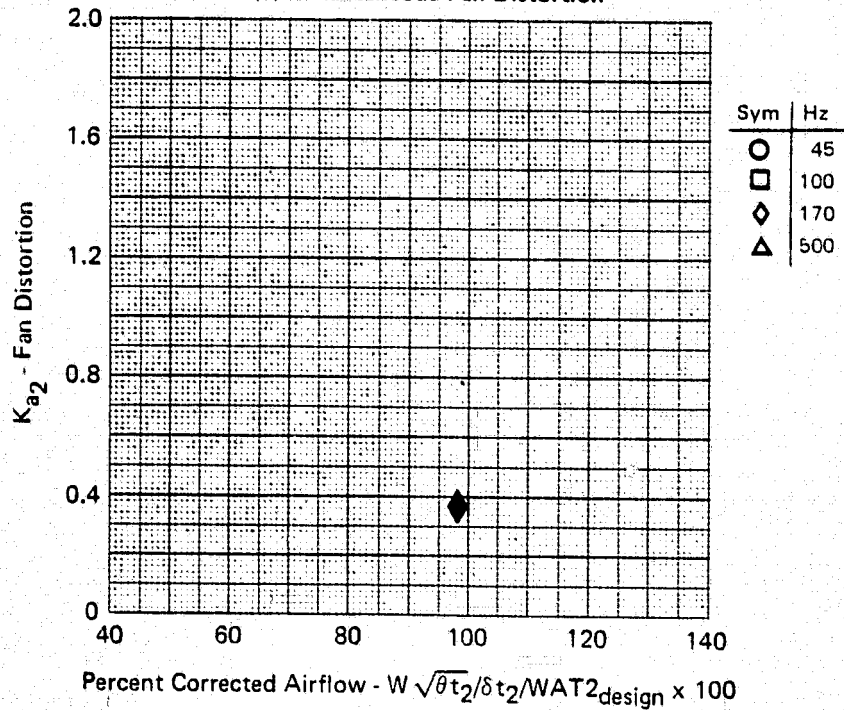
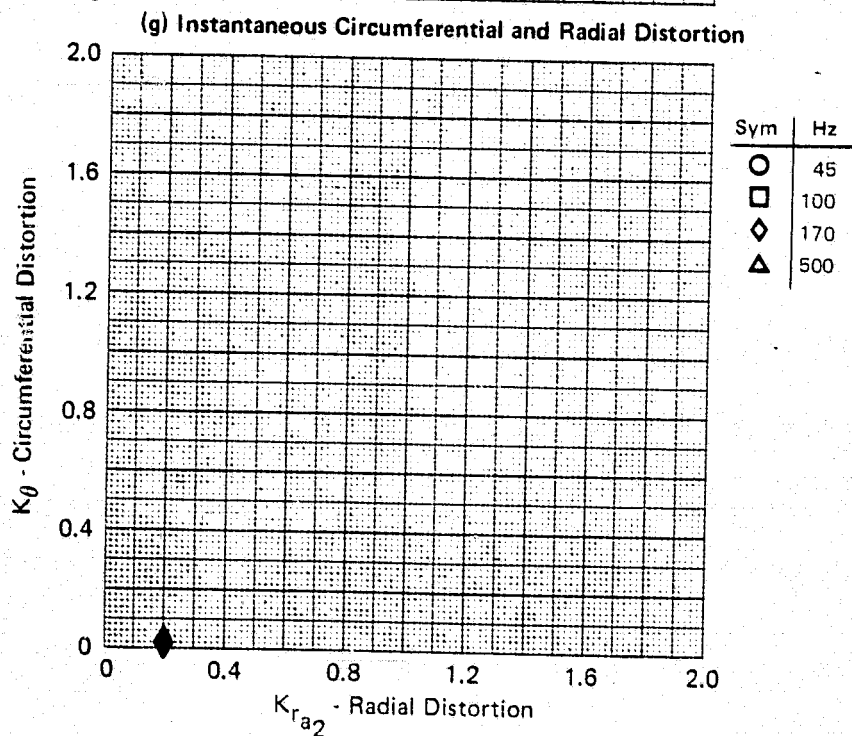
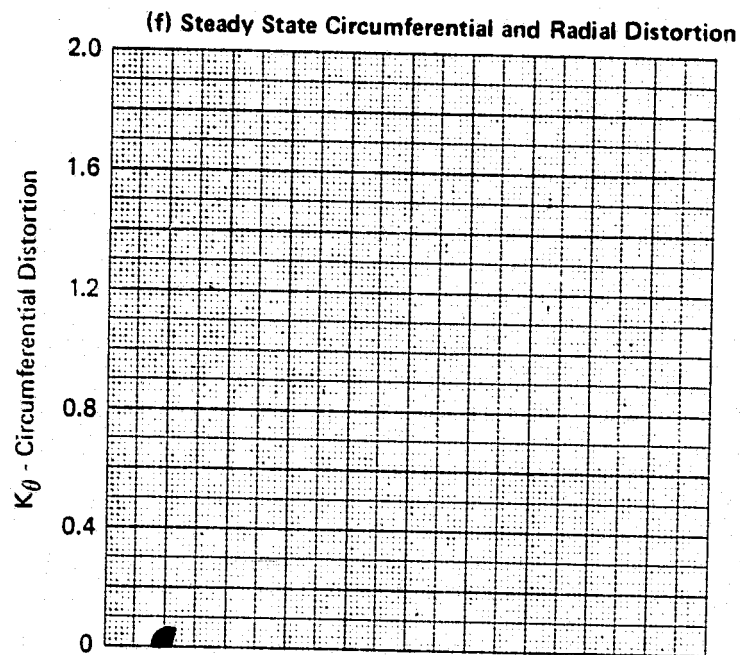


FIGURE G-25 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = 4.0, \beta = 0.0, WAT2 = 97.7\%$

GP77-0658-J

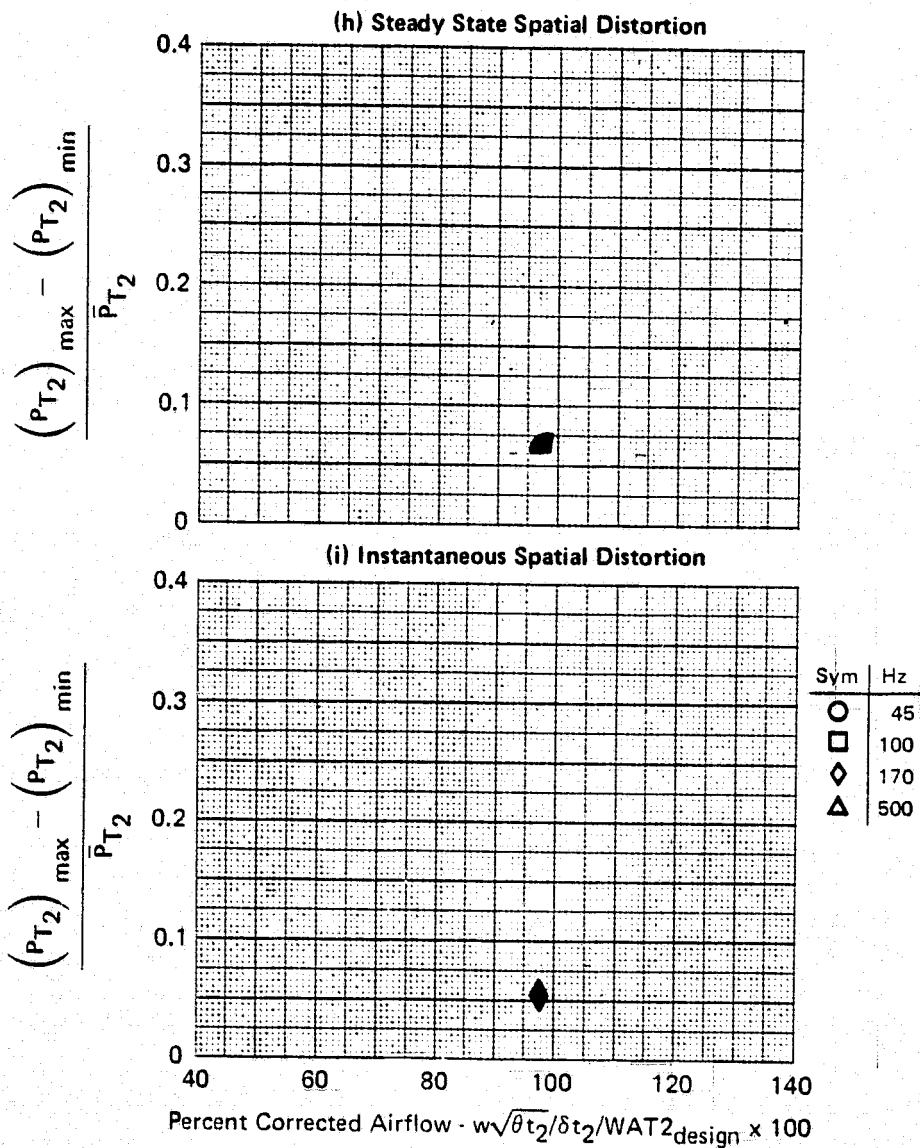
FSE - NASA Data Study
 Part/Point - 126/2, Ident 25
 RHO DELTA3 BYPASS CIVV
 7.3 10.4 0.0 -11.00



GP77-0658-2

FIGURE G-25 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 97.7\%$

FSE - NASA Data Study
 Part/Point - 126/2, Ident 25
 RHO DELTA3 BYPASS CIVV
 7.3 10.4 0.0 -11.00



GP77-0658-4

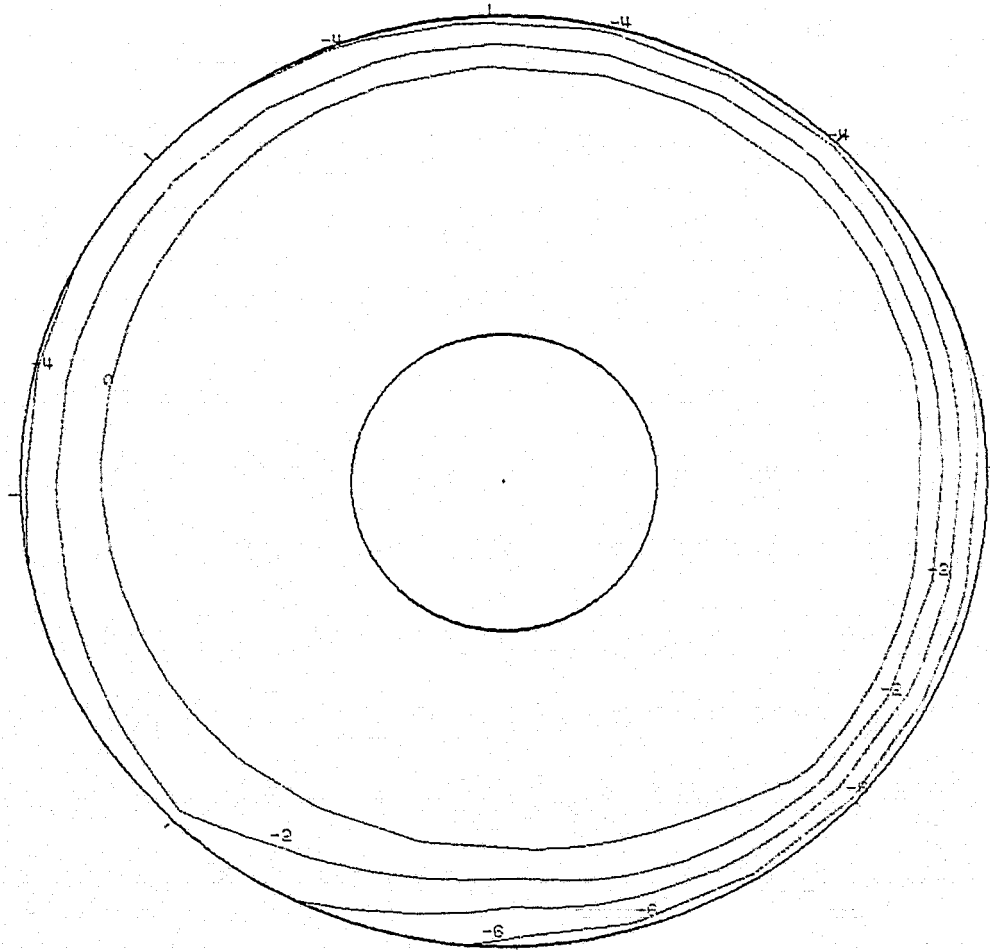
FIGURE G-25 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 97.7\%$

FSE - NASA DATA STUDY

DATA PART/POINT 126 / 2 IDENT. 25
THE SEGMENT START TIME WAS AT 3: 3: 1.061

MACH 0.9	ALPHA 4	BETA 0	RHO 7.5	DELTA2 10.4	BYPASS 0.0	WAT2 97.7%	QIVV -11.0
PI 83.99 (12.181)	PI/PS 1.920	KTHETA 0.028	KPA2 0.123	KPA3 0.307	KQ2 0.335	KQ3 0.008	KASP 0.006
							D2 0.066

25 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 83.99 kPa (12.181 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

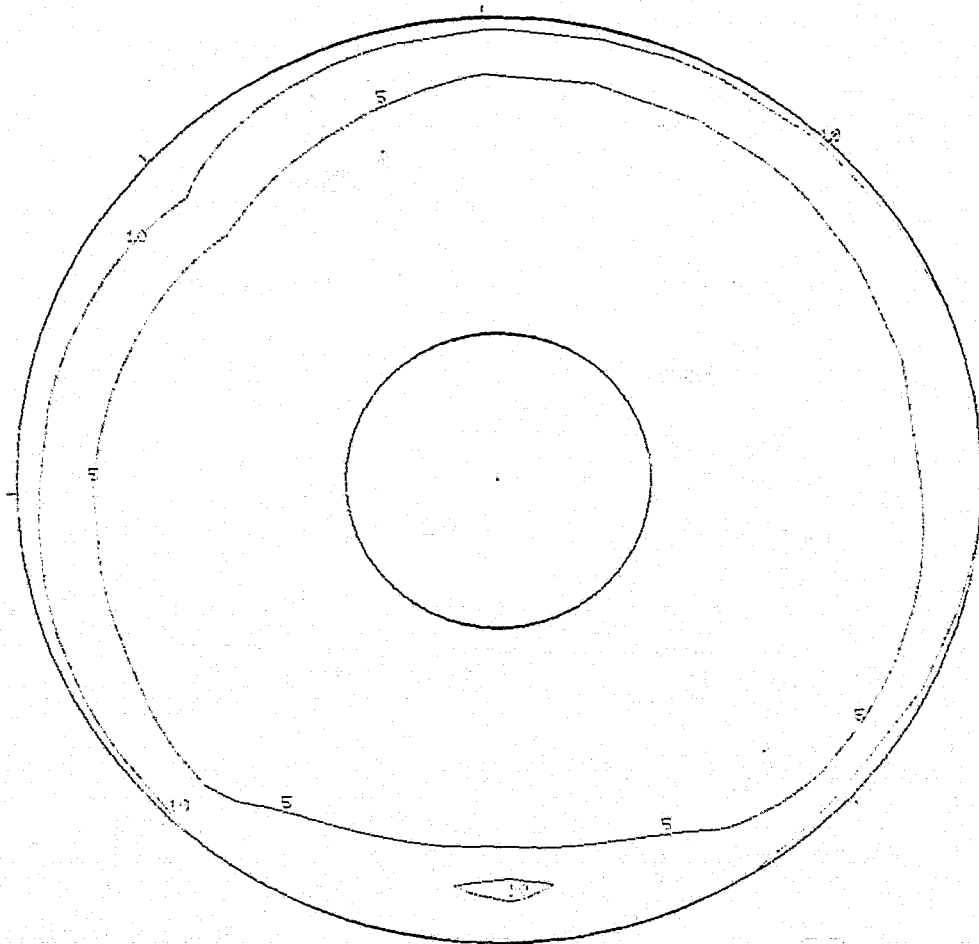
FIGURE G-25 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 97.7 %

FSE - NASA DATA STUDY

DATA PART/POINT 126 / 2 IDENT. 25
THE SEGMENT START TIME WAS AT 3: 3: 1.061

MACH	ALPHA	BETA	PHI	DELTA2	BYPASS	WAT2	CIVV
0.9	4.0	0.0	1.3	10.1	0.2	97.7%	-11.0

25(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00376

FIGURE G-25 (Continued)

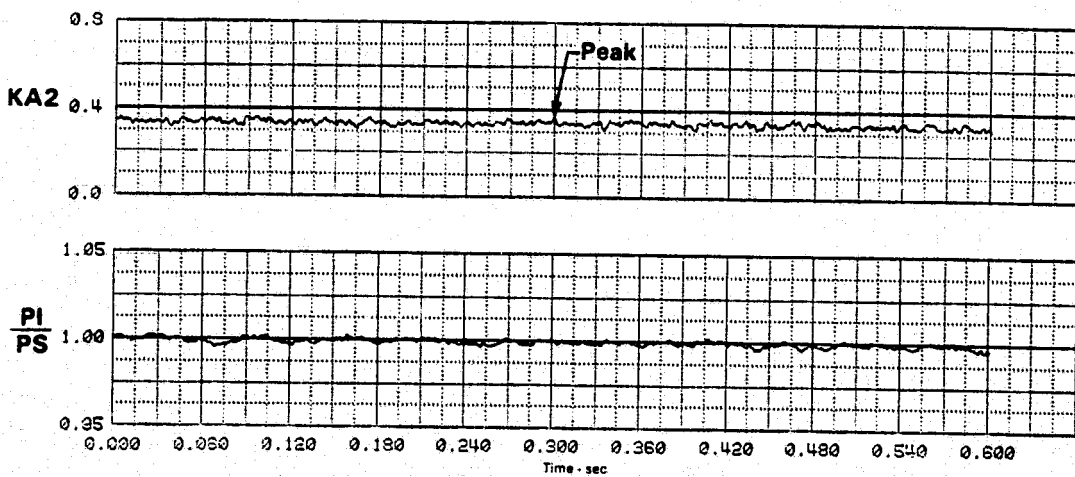
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 97.7 %

FSE - NASA DATA STUDY

DATA PART/POINT 126 / 2 IDENT. 25
THE SEGMENT START TIME WAS AT 3: 8: 1.061

MACH 0.9	ALPHA 4	BETA 0	RHO 7.3	DELTA3 10.4	BYPASS 0.0	WAT2 97.7%	CIVV -11.0
PI 84.09 (12.196)	PI/PS 1.001	KTHETA 0.032	KPA2 0.306	BKFC2 0.337	KAG 0.339	KC2 0.014	KOSP 0.007
							D2 0.056

25(I) Time History Plots 170 Hz



PEAK AT TIME = 0.299714 SECONDS

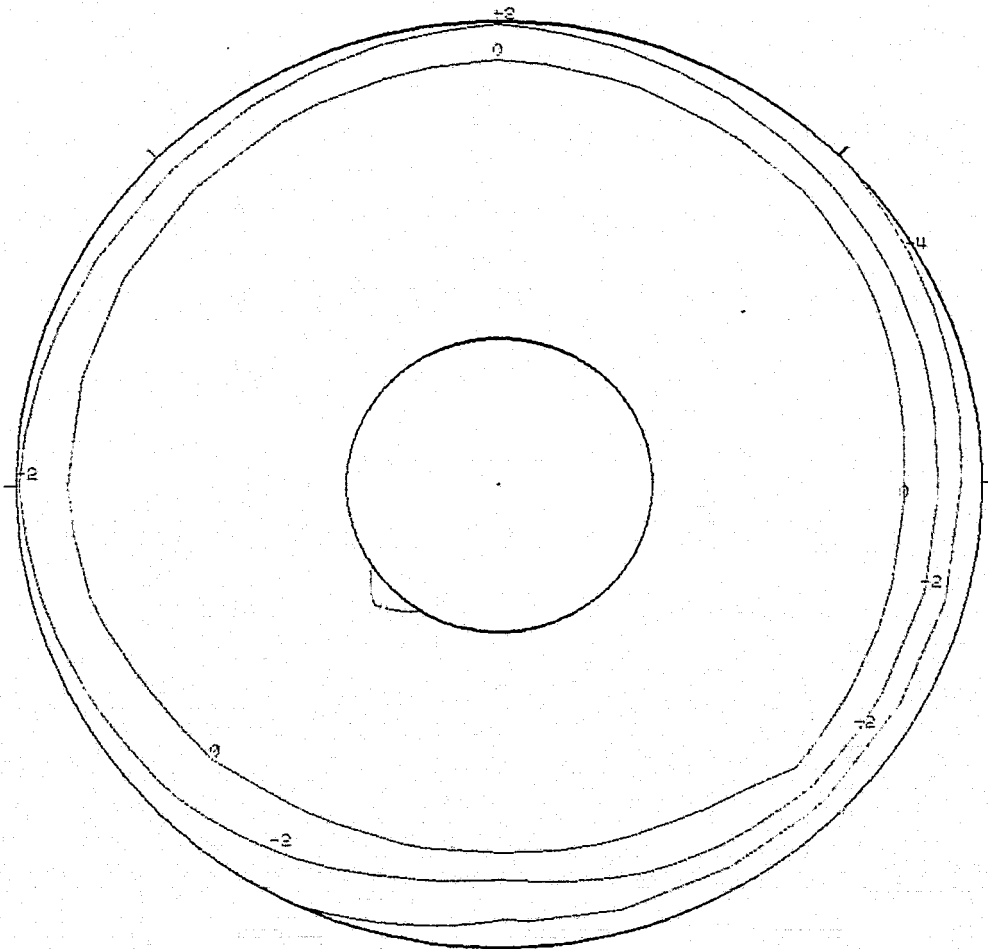
FIGURE G-25 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 97.7%

FSE - NASA DATA STUDY

DATA PART/POINT 126 / 2 IDENT. 25
THE SEGMENT START TIME WAS AT 3: 8: 1.061

MACH 0.9	ALPHA 4	BETA 0	RHO 7.3	DELTA3 10.4	BYPASS 0.0	WAT2 97.7%	QIVV -11.0
P1 84.09 (12.196)	PI/PS 1.991	KTHETA 3.032	KRA2 0.206	BKRA2 0.337	KA2 0.359	KC2 0.314	KOSP 0.007
							D2 0.056

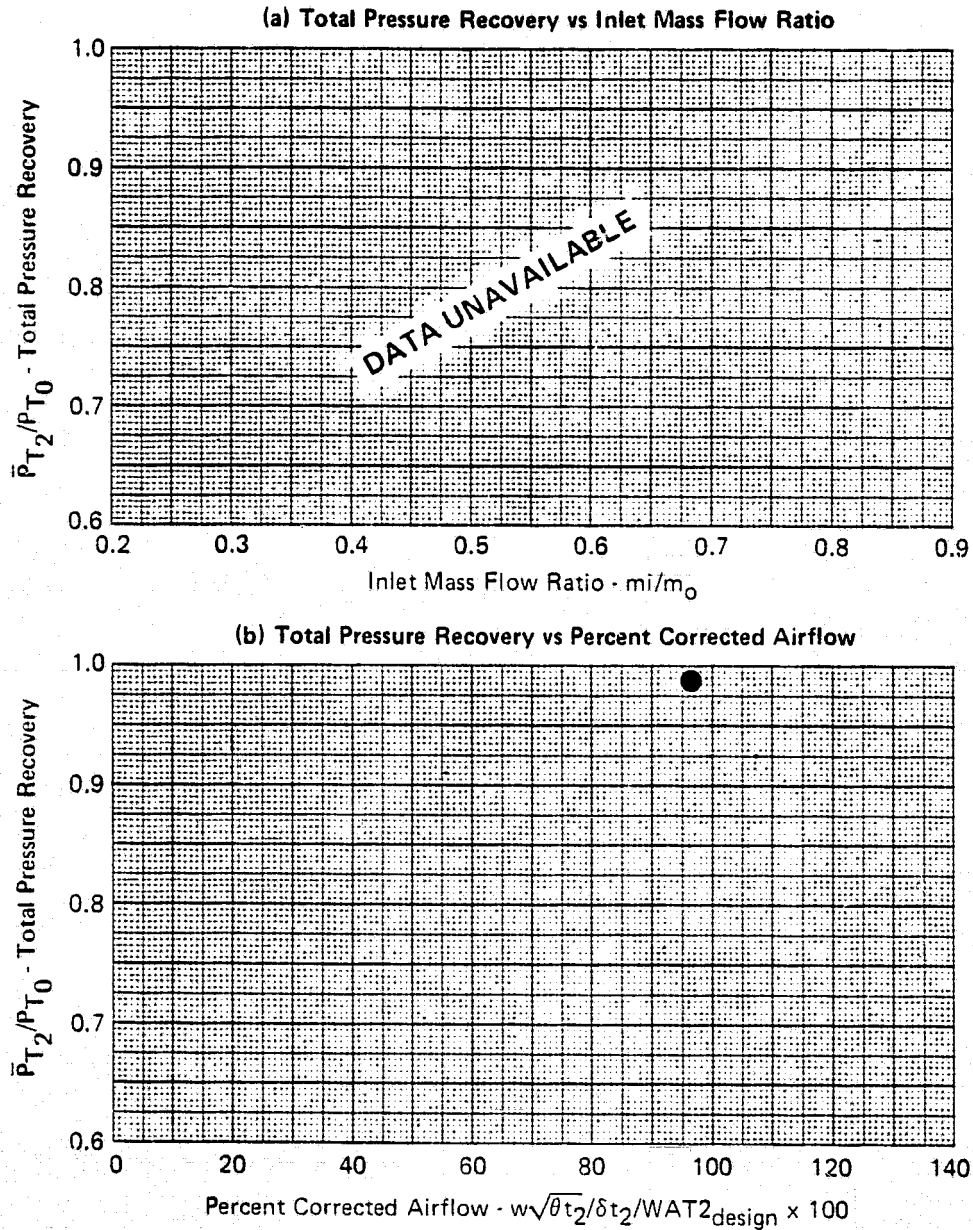
**25(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz**



MEAN FACE PRESSURE = 84.09 kPa (12.196 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.299714 SECONDS

FIGURE G-25 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.9$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 97.7 %

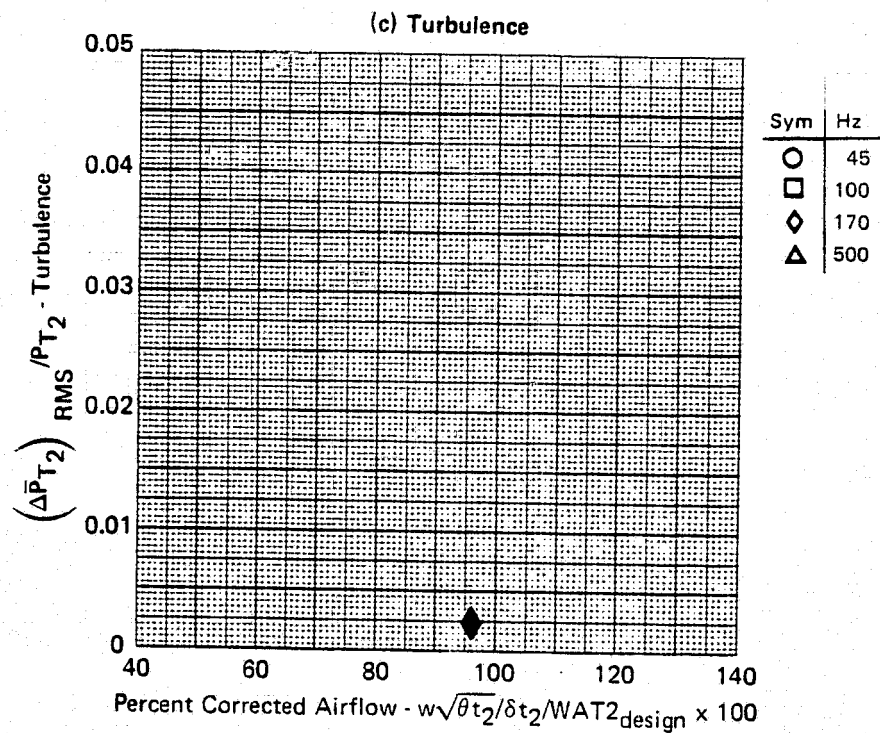
FLIGHT - NASA Data Study
 Part/Point - 420/9, Ident 26
 RHO DELTA3 BYPASS CIVV
 6.0 11.0 0.0 -14.479



GP77-0658-1

FIGURE G-26
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.92, \alpha = 4.6, \beta = 0.7, WAT2 = 96.2\%$

FLIGHT - NASA Data Study
 Part/Point - 420/9, Ident 26
 RHO DELTA3 BYPASS CIVV
 6.0 11.0 0.0 -14.479

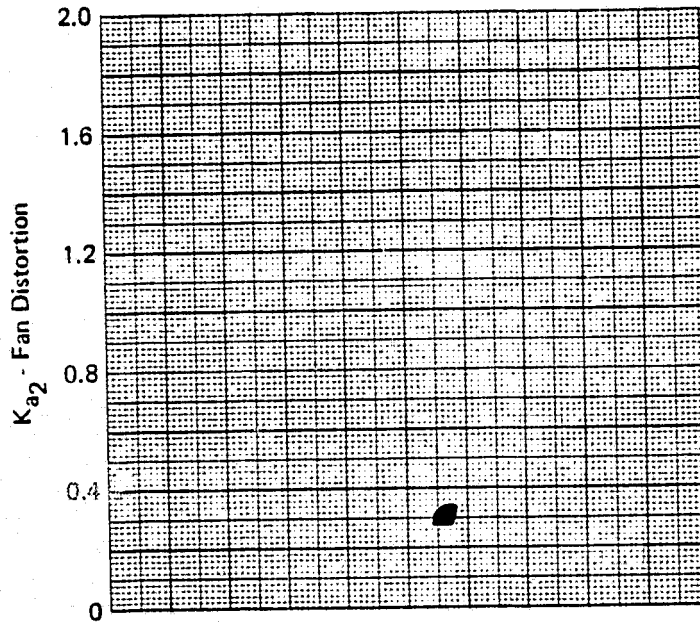


GP77-0658-5

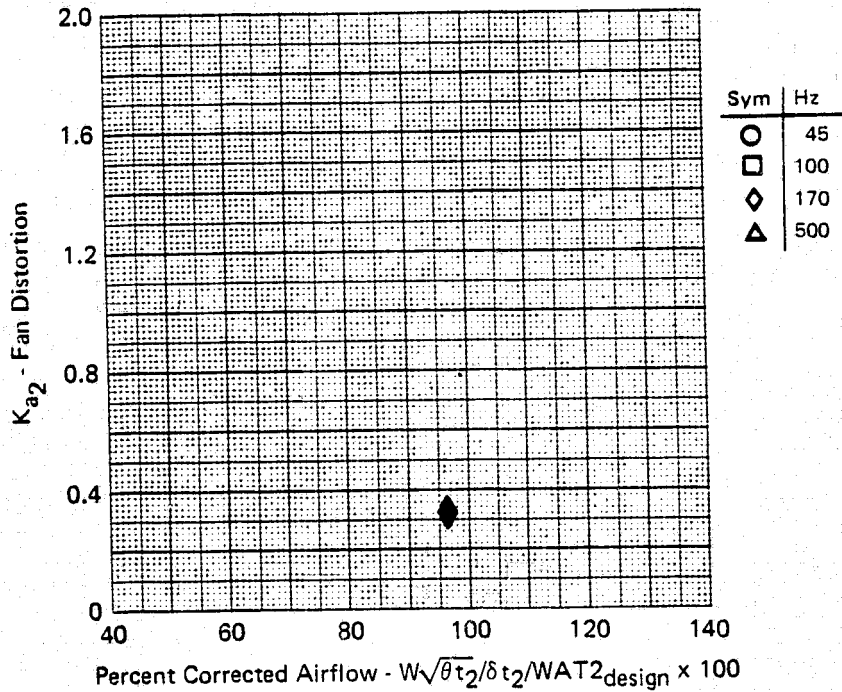
FIGURE G-26 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.92$, $\alpha = 4.6$, $\beta = 0.7$, $WAT2 = 96.2\%$

FLIGHT - NASA Data Study
 Part/Point - 420/9, Ident 26
 RHO DELTA3 BYPASS CIVV
 6.0 11.0 0.0 -14.479

(d) Steady State Fan Distortion



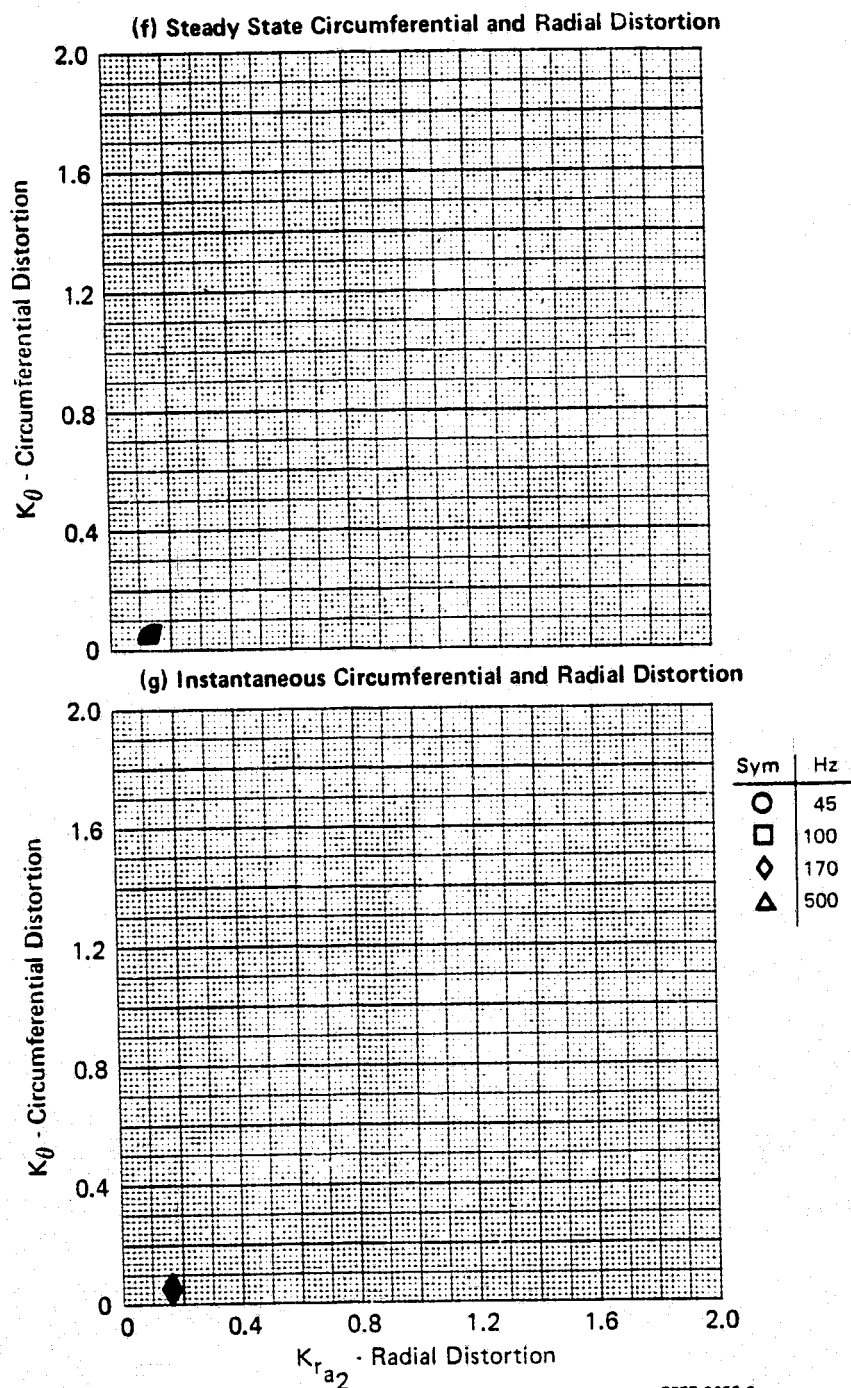
(e) Instantaneous Fan Distortion



GP77-0658-3

FIGURE G-26 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.92$, $\alpha = 4.6$, $\beta = 0.7$, $WAT2 = 96.2\%$

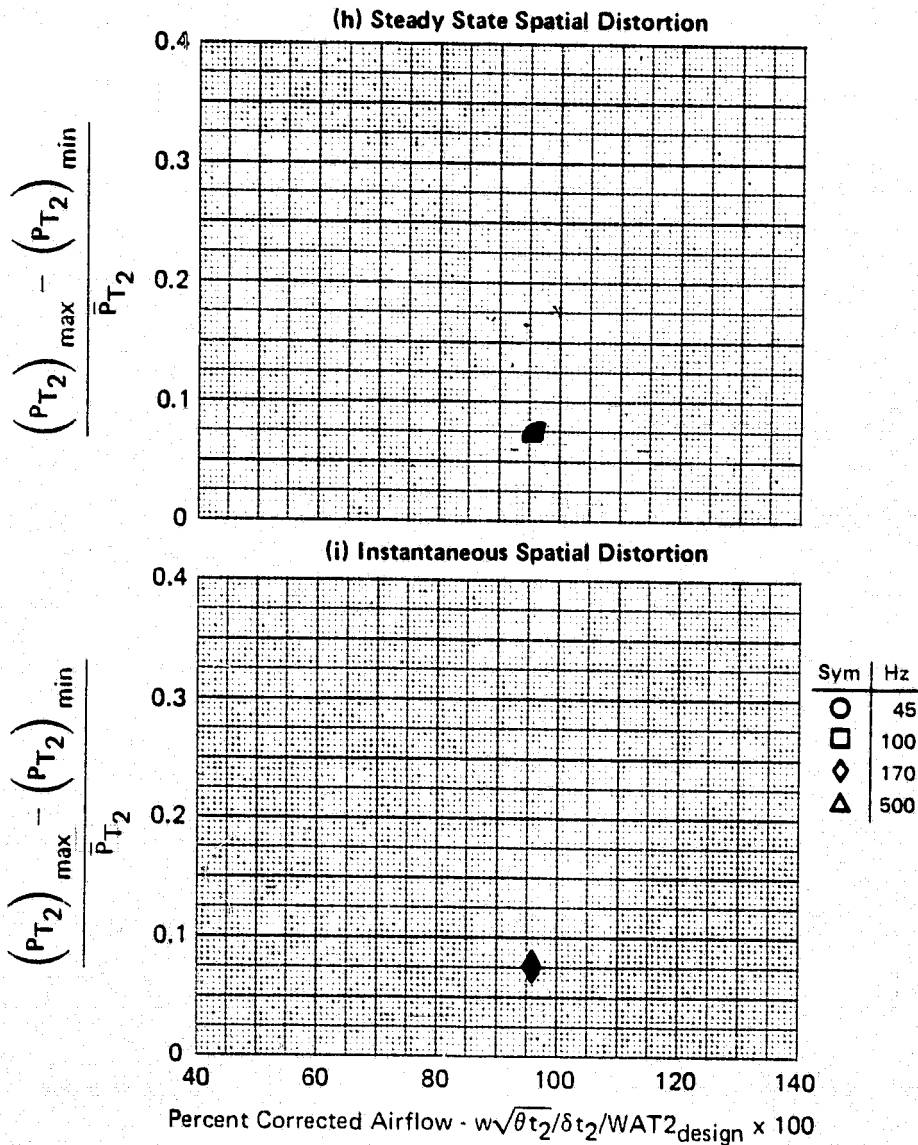
FLIGHT - NASA Data Study
 Part/Point - 420/9, Ident 26
 RHO DELTA3 BYPASS CIVV
 6.0 11.0 0.0 -14.479



GP77-0658-2

FIGURE G-26 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.92$, $\alpha = 4.6$, $\beta = 0.7$, WAT2 = 96.2 %

FLIGHT - NASA Data Study
 Part/Point - 420/9, Ident 26
 RHO DELTA3 BYPASS CIVV
 6.0 11.0 0.0 -14.479



GP77-0658-4

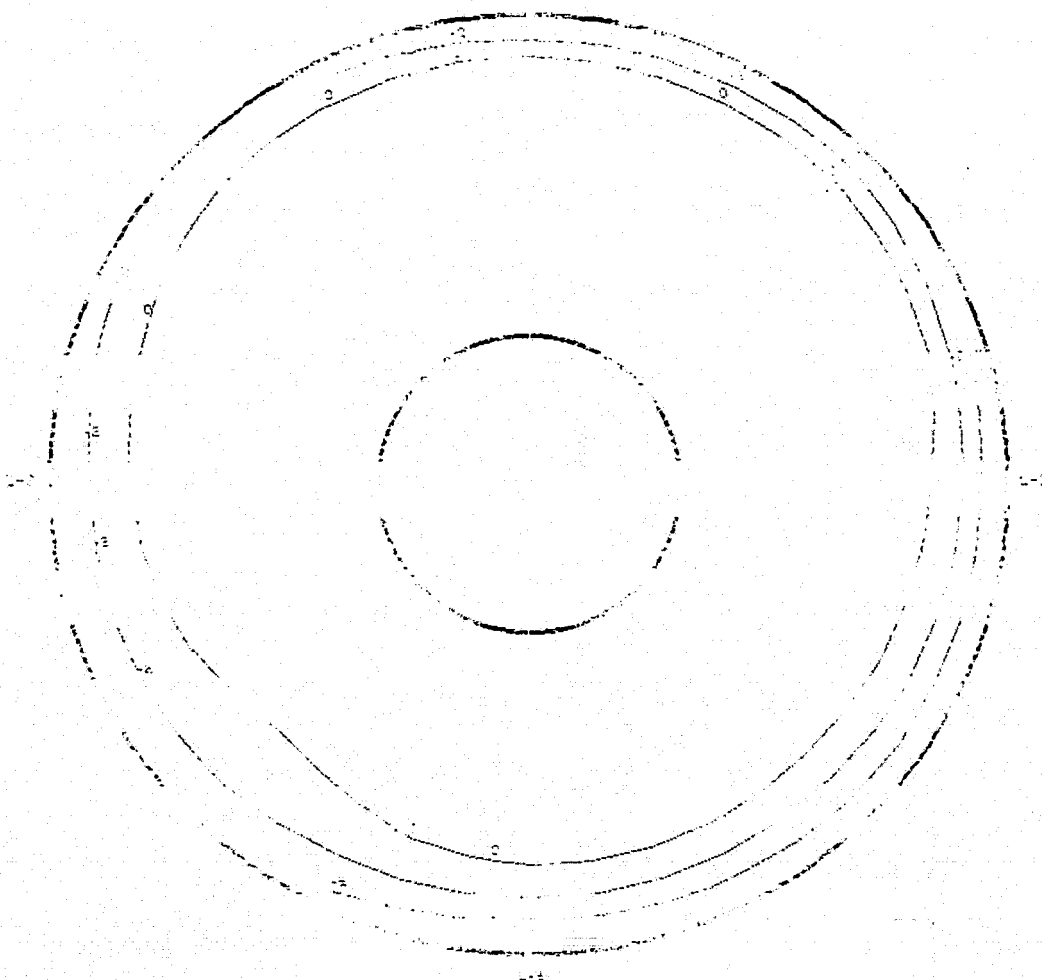
FIGURE G-26 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.92, \alpha = 4.6, \beta = 0.7, WAT2 = 96.2 \%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 420/9 IDENT.26
THE SEGMENT START TIME WAS AT 00:20:18.892

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.92	4.6	0.7	6077(19937)	6.0	11.0	0.0	96.2%	-14.479
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
79.92(11.591)	1.0	0.0505	.1434	.2418	.2953	.0165	—	.0745

26(j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 79.92 kPa (11.591 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

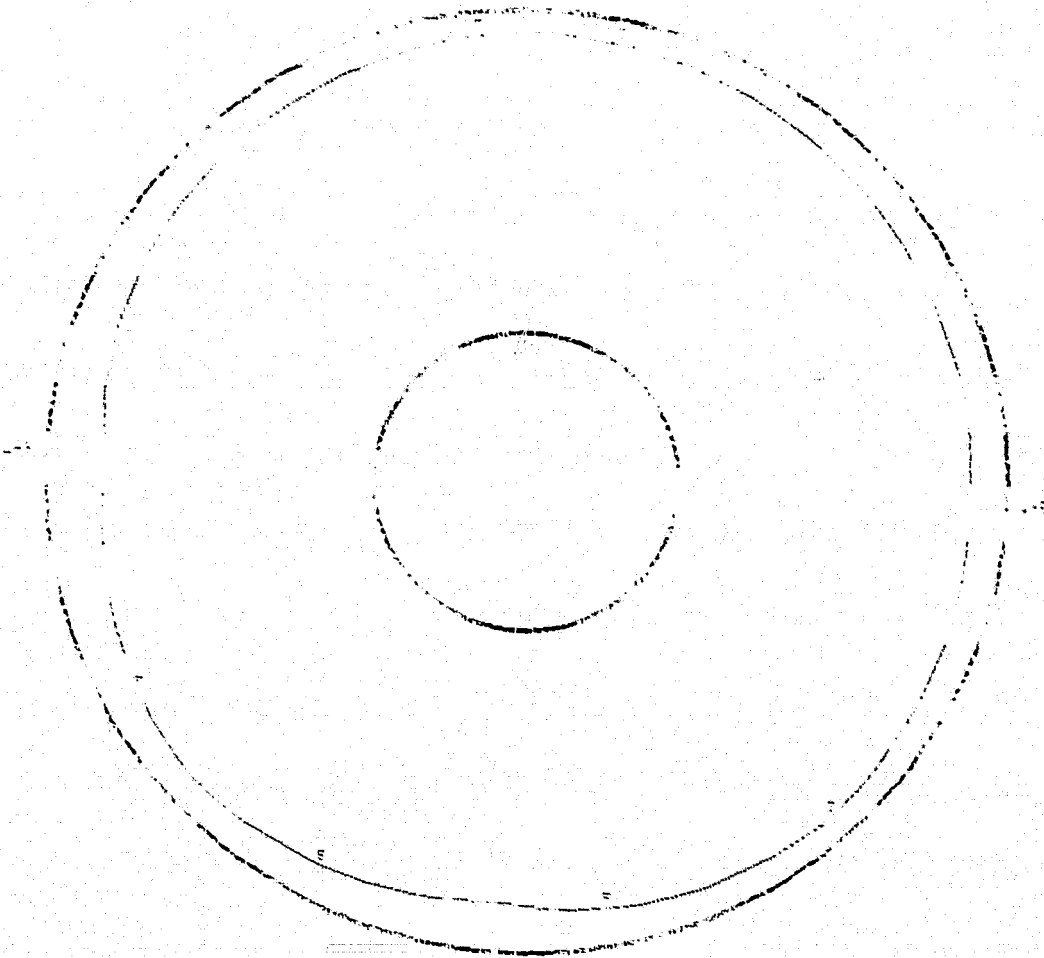
FIGURE G-26 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .92$, $\alpha = 4.6$, $\beta = 0.7$, WAT2 = 96.2 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 420/9 IDENT. 26
THE SEGMENT START TIME WAS AT 00:20:18.892

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.92	4.6	0.7	8077(19937)	6.0	11.0	0.0	96.2%	-14.479

26(k) Turbulence Contour
170 Hz



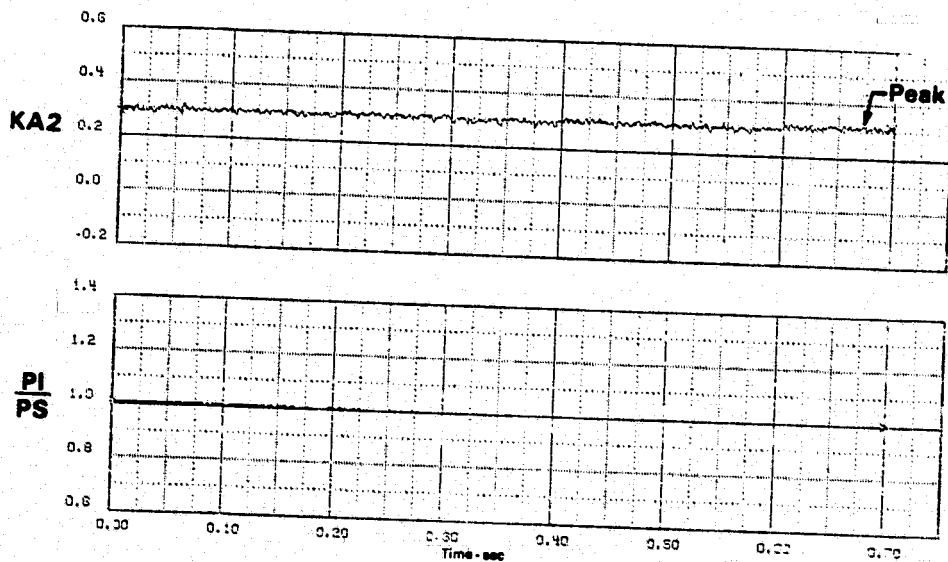
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0024
FIGURE G-26 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .92$, $\alpha = 4.6$, $\beta = 0.7$, $WAT2 = 96.2\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 420/9 IDENT. 26
THE SEGMENT START TIME WAS AT 00:20:18.892

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.92	4.6	0.7	6076(19938)	6.0	11.0	0.0	96.2%	-14.479
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
79.84(11.58)	.9991	.0670	.1665	.2639	.3208	.0207	.0197	.0761

26(I) Time History Plots 170 Hz



PEAK AT TIME = 0.67233 SECONDS

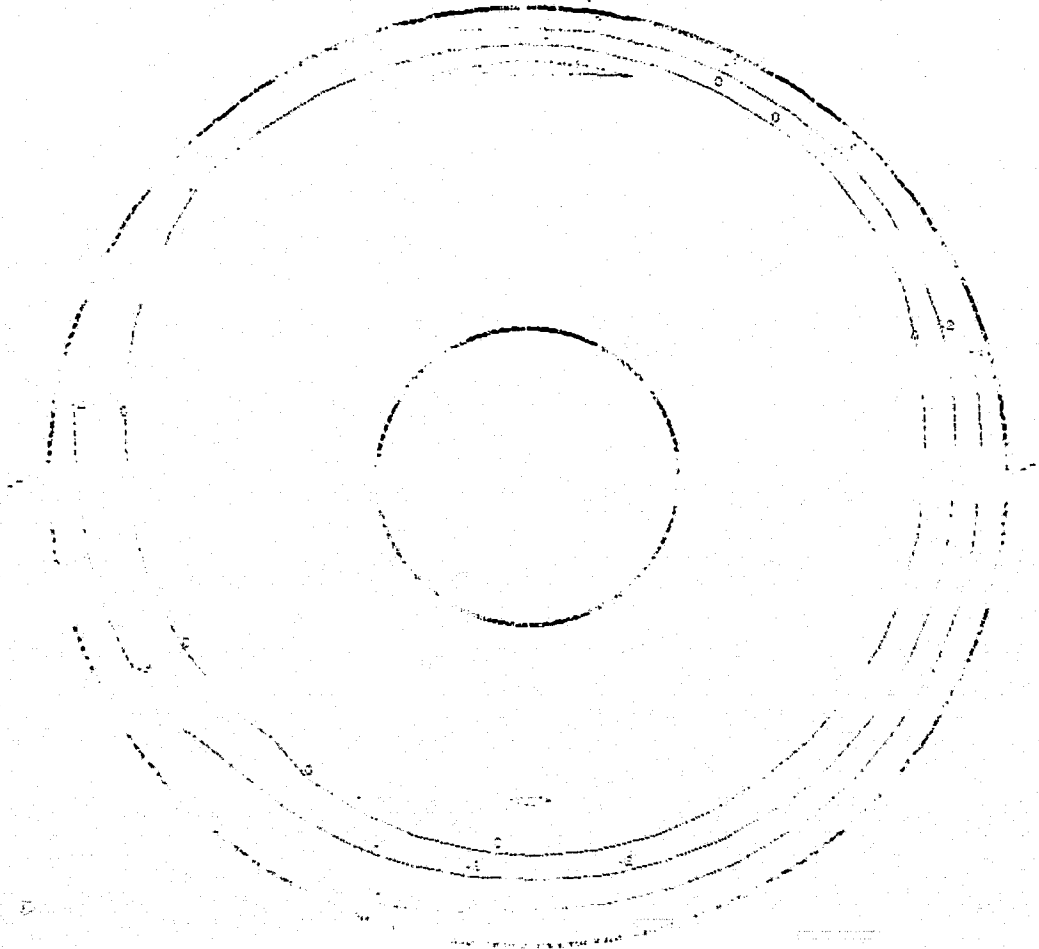
FIGURE G-26 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .92$, $\alpha = 4.6$, $\beta = 0.7$, $WAT2 = 96.2\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 420/9 IDENT. 28
THE SEGMENT START TIME WAS AT 00:20:18.892

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.92	4.6	0.7	6076(19935)	6.0	11.0	0.0	96.2%	-14.479
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
79.84(11.58)	.9991	.0570	.1565	.2639	.3208	.0207	.0197	.0761

26(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



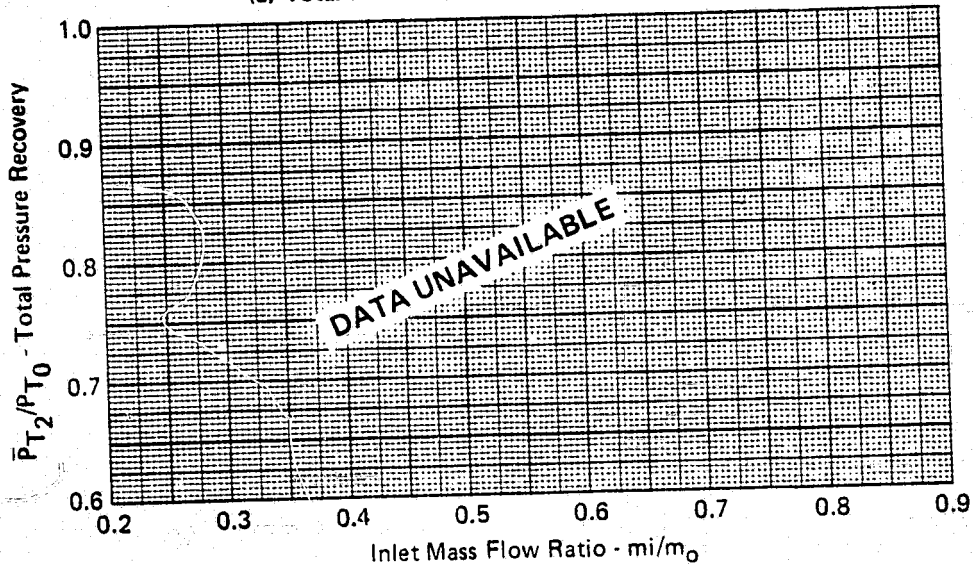
MEAN FACE PRESSURE = 79.84 kPa (11.580 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.67233 SECONDS

FIGURE G-26 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .92$, $\alpha = 4.6$, $\beta = 0.7$, WAT2 = 96.2 %

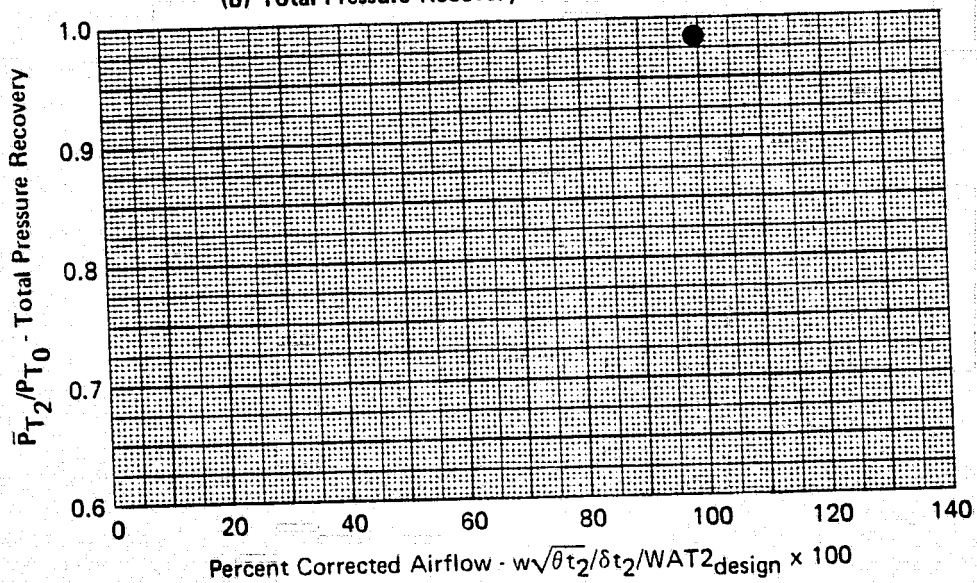
FLIGHT - NASA Data Study
Part/Point - 422/2, Ident 27

RHO	DELTA3	BYPASS	CIVV
6.9	11.1	0.0	-11.284

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



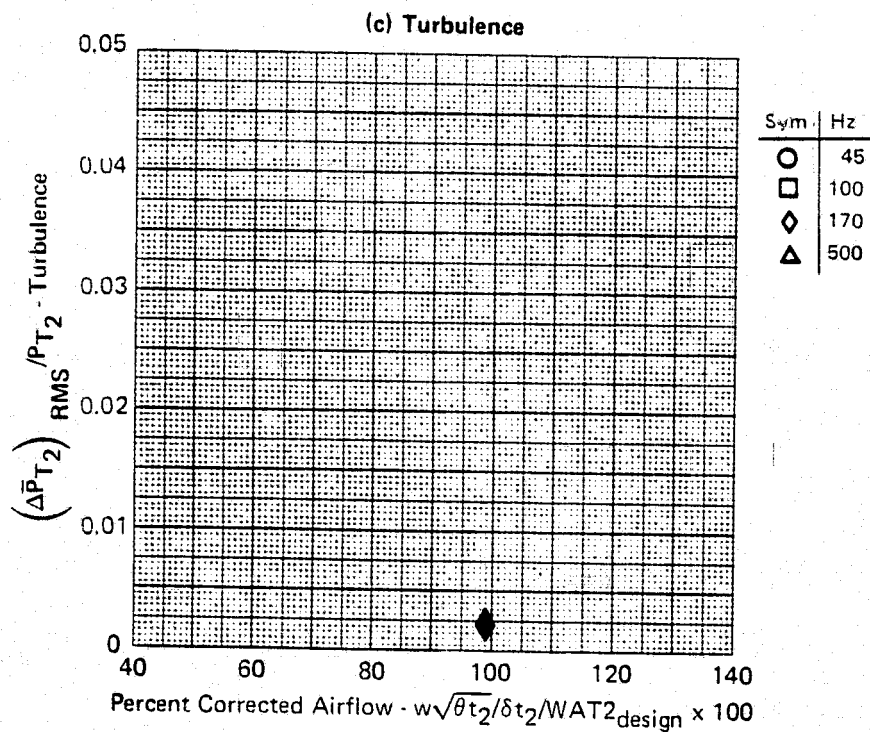
(b) Total Pressure Recovery vs Percent Corrected Airflow



GP77-0658-1

FIGURE G-27
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.91, \alpha = 5.2, \beta = 0.5, WAT2 = 99.1\%$

FLIGHT - NASA Data Study
 Part/Point - 422/2, Ident 27
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -11.284



GP77-0658-5

FIGURE G-27 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.91$, $\alpha = 5.2$, $\beta = 0.5$, $WAT2 = 99.1\%$

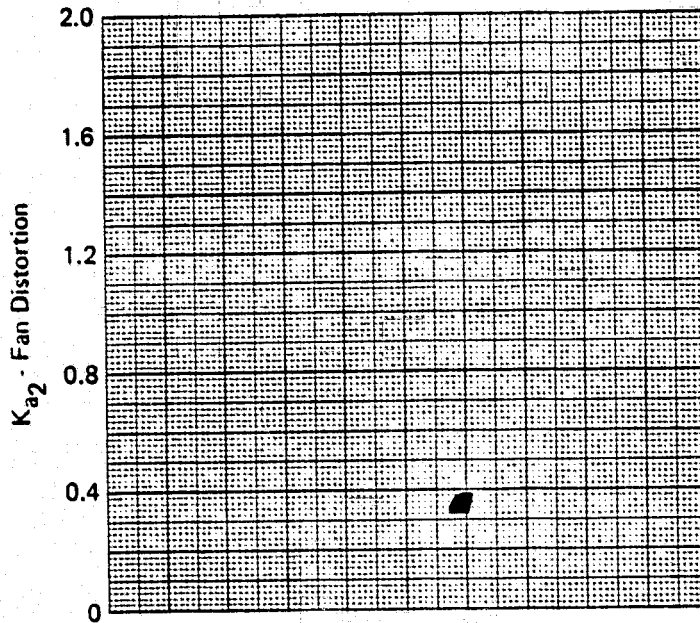
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FLIGHT - NASA Data Study

Part/Point - 422/2, Ident 27

RHO	DELTA3	BYPASS	CIVV
6.9	11.1	0.0	-11.284

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion

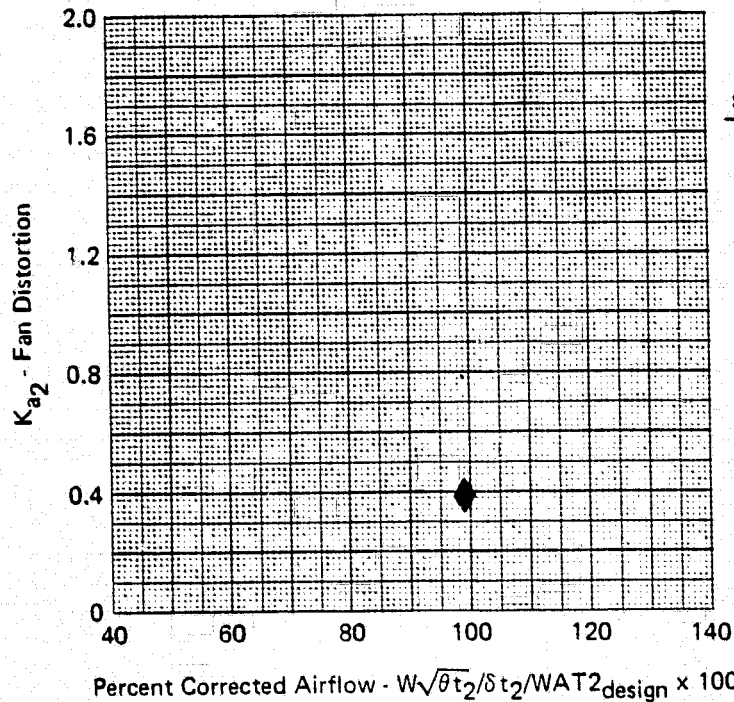
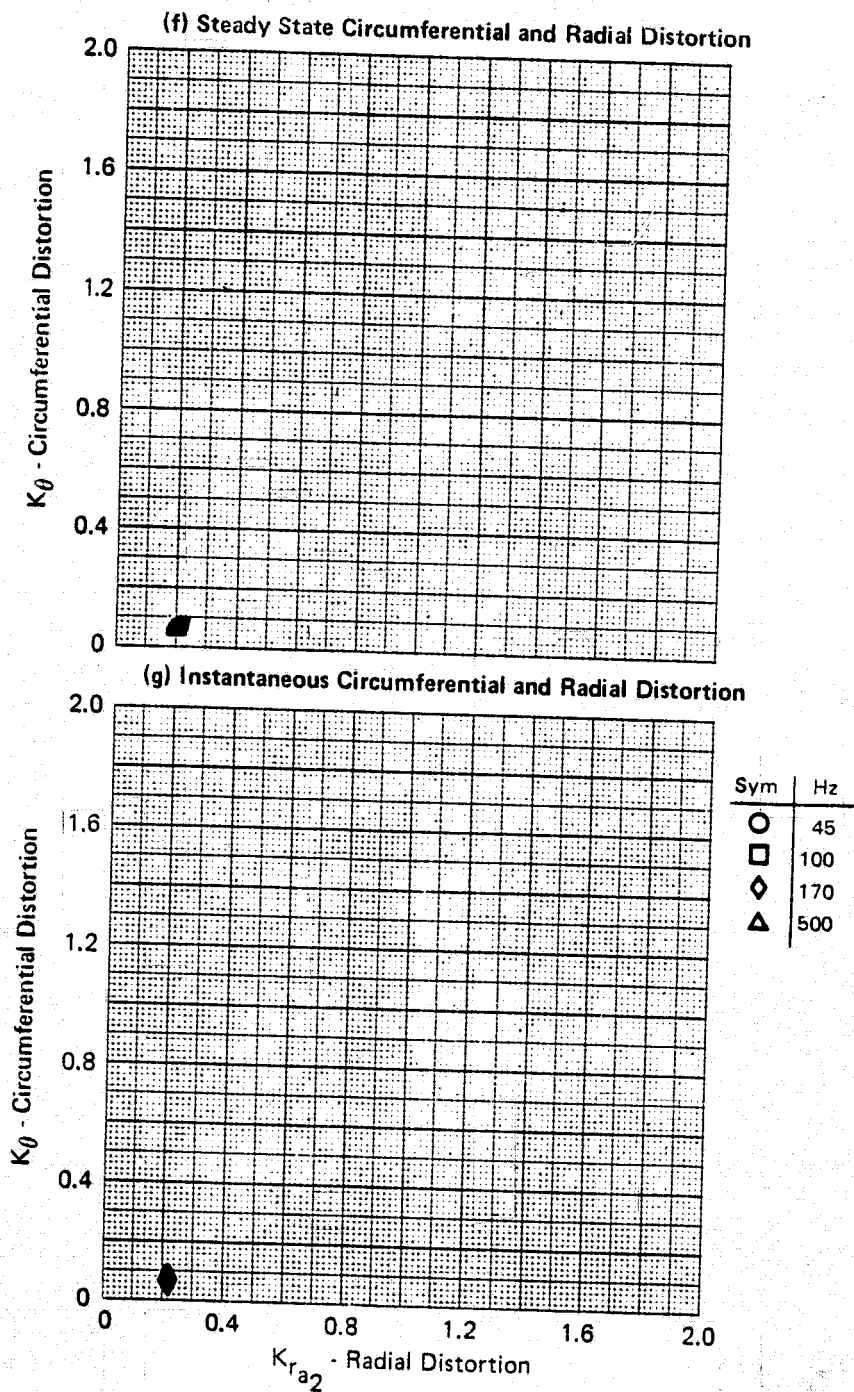


FIGURE G-27 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.91, \alpha = 5.2, \beta = 0.5, WAT2 = 99.1\%$

GP77-0658-3

FLIGHT - NASA Data Study
 Part/Point - 422/2, Ident 27
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -11.284



GP77-0658-2

FIGURE G-27 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.91$, $\alpha = 5.2$, $\beta = 0.5$, $WAT2 = 99.1\%$

FLIGHT - NASA Data Study
 Part/Point - 422/2, Ident 27
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -11.284

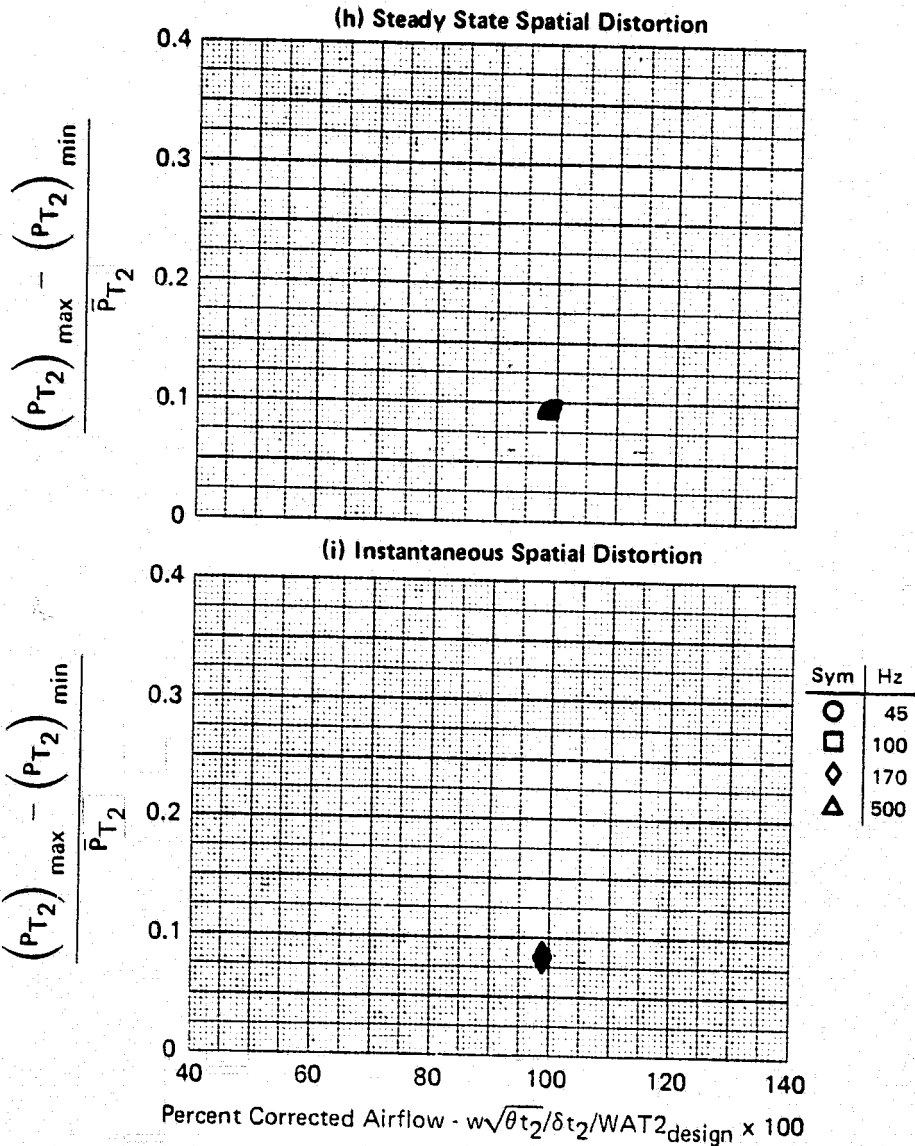


FIGURE G-27 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.91$, $\alpha = 5.2$, $\beta = 0.5$, $WAT2 = 99.1\%$

GP77-0658-4

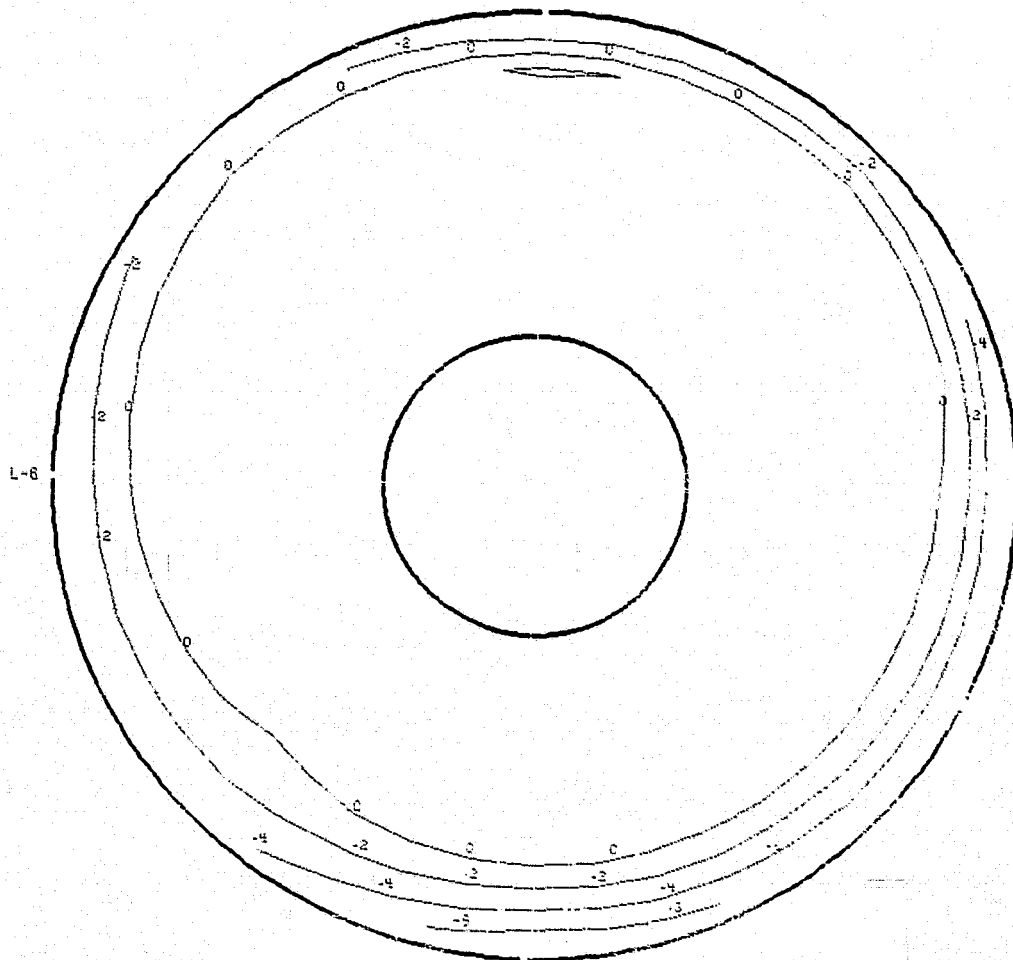
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 422/2 IDENT.27
THE SEGMENT START TIME WAS AT 21:04:54.910

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.91	5.2	0.5	6616(21706)	6.9	11.1	0.0	99.1%	-11.284
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
73.13(10.607)	1.0	.0571	.2114	.2945	.3518	.0185	—	.0930

27 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 73.13 kPa (10.607 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

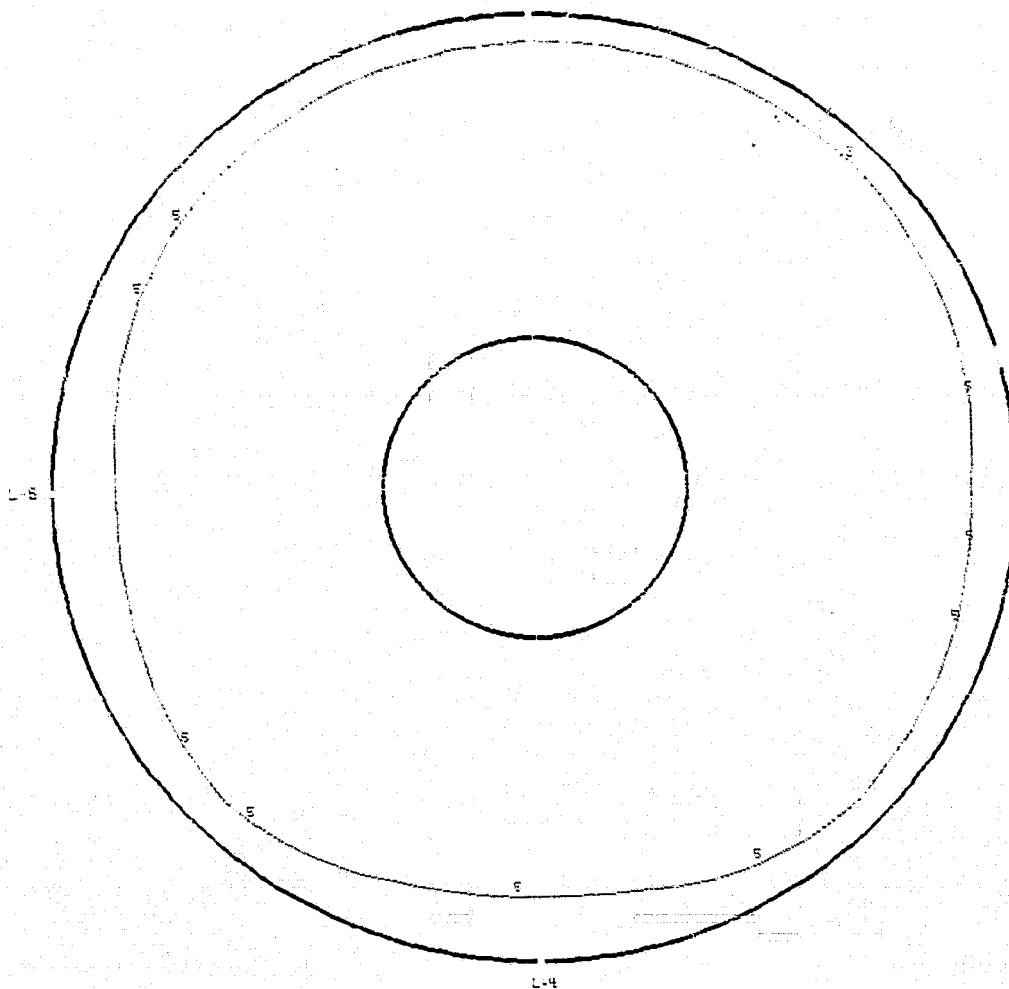
FIGURE G-27 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .91$, $\alpha = 5.2$, $\beta = 0.5$, WAT2 = 99.1 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 422/2 IDENT. 27
THE SEGMENT START TIME WAS AT 21:04:54.910

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.91	5.2	0.5	8616(21706)	6.9	11.1	0.0	99.1%	-11.284

27(k) Turbulence Contour
170 Hz



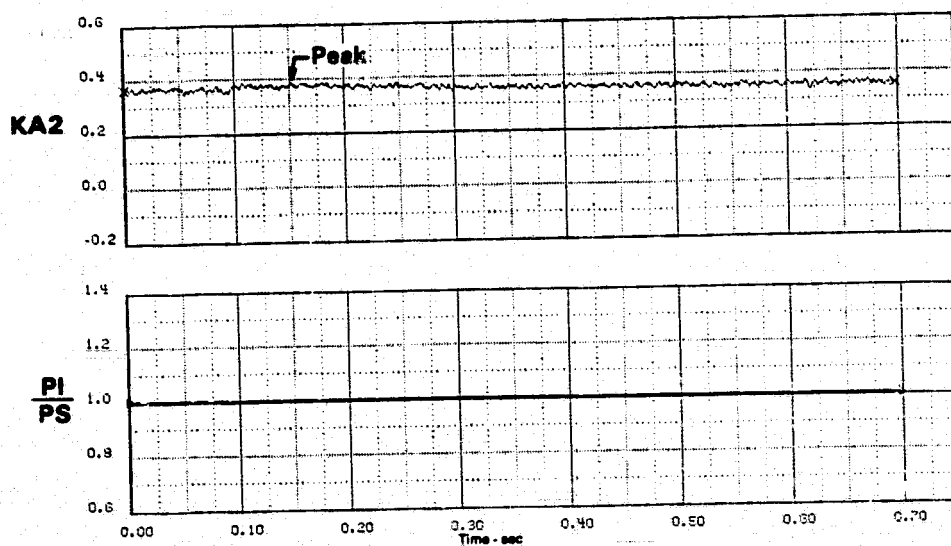
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0023
FIGURE G-27 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .91$, $\alpha = 5.2$, $\beta = 0.5$, $WAT2 = 99.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 422/2 IDENT. 27
THE SEGMENT START TIME WAS AT 21:04:54.910

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.91	5.2	0.5	6625(21734)	6.9	11.1	0.0	99.1%	-11.284
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	O2
73.36(10.64)	1.0031	.0693	.2255	.3141	.3836	.0333	.0347	.0853

27(I) Time History Plots
170 Hz



PEAK AT TIME = 0.15110 SECONDS

FIGURE G-27 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .91$, $\alpha = 5.2$, $\beta = 0.5$, WAT2 = 99.1 %

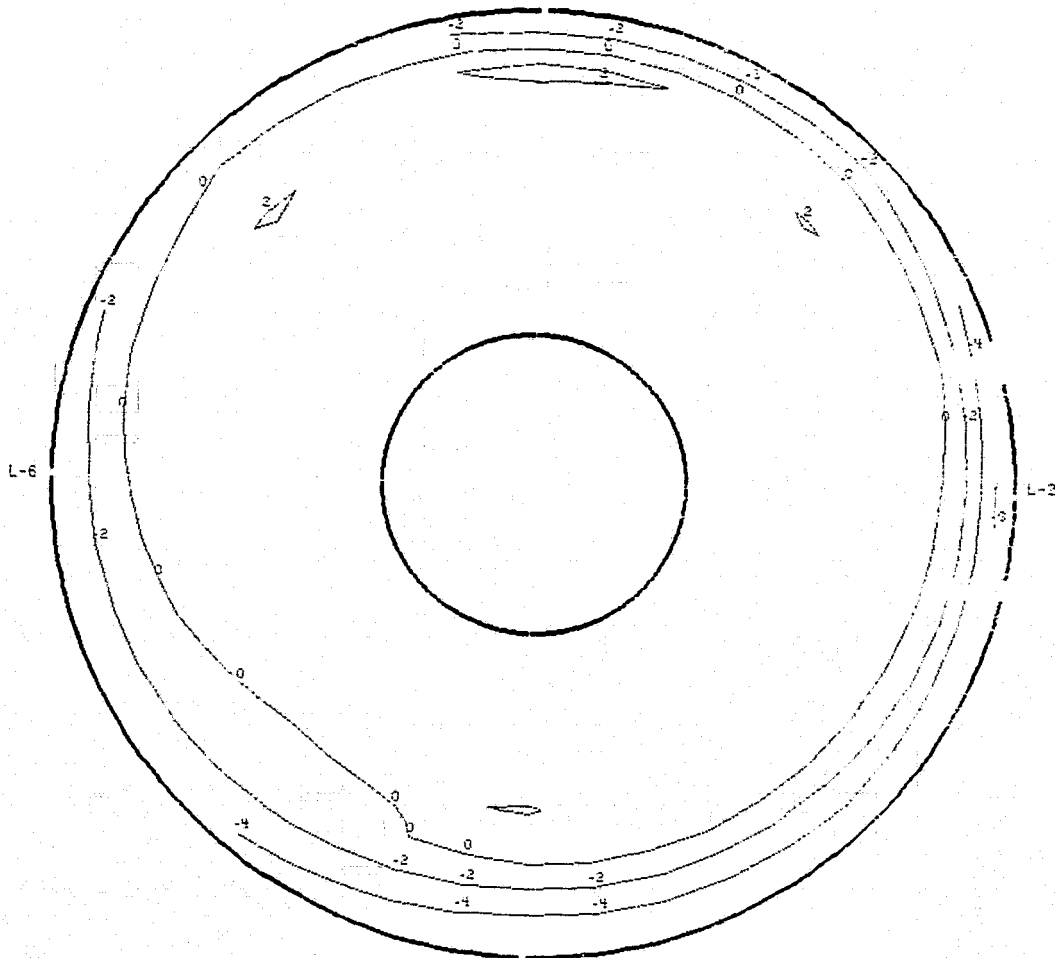
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 422/2 IDENT. 27
THE SEGMENT START TIME WAS AT 21:04:54.910

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.91	5.2	0.5	6625(21734)	6.9	11.1	0.0	99.1%	-11.284
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	O2
73.36(10.64)	1.0031	.0693	.2255	.3141	.3836	.0333	.0347	.0853

27(m):Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 73.36 kPa (10.640 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.15110 SECONDS

FIGURE G-27 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .91$, $\alpha = 5.2$, $\beta = 0.5$, $WAT2 = 99.1\%$

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FLIGHT - NASA Data Study
 Part/Point - 421/5, Ident 28
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00

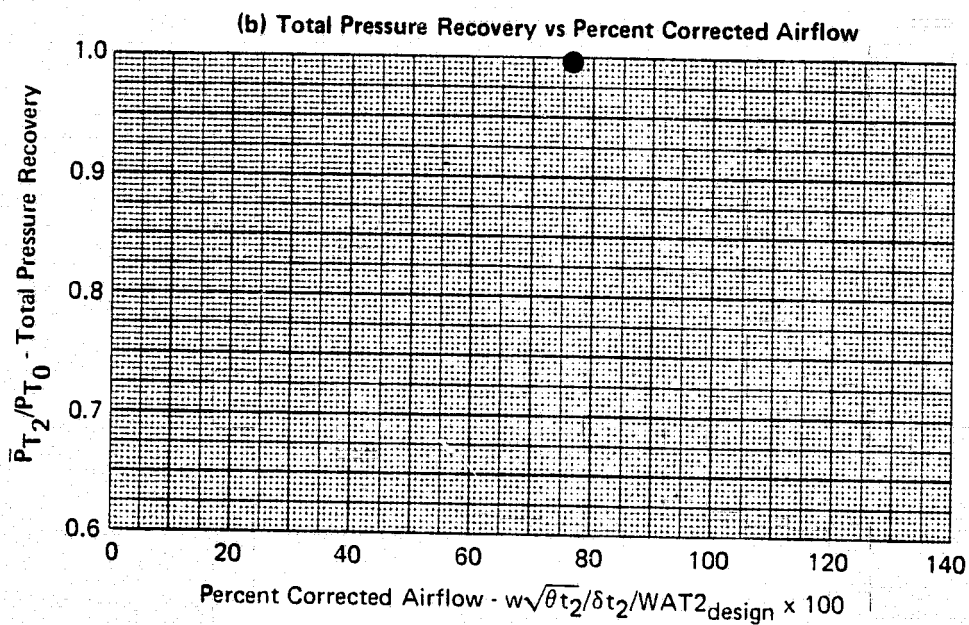
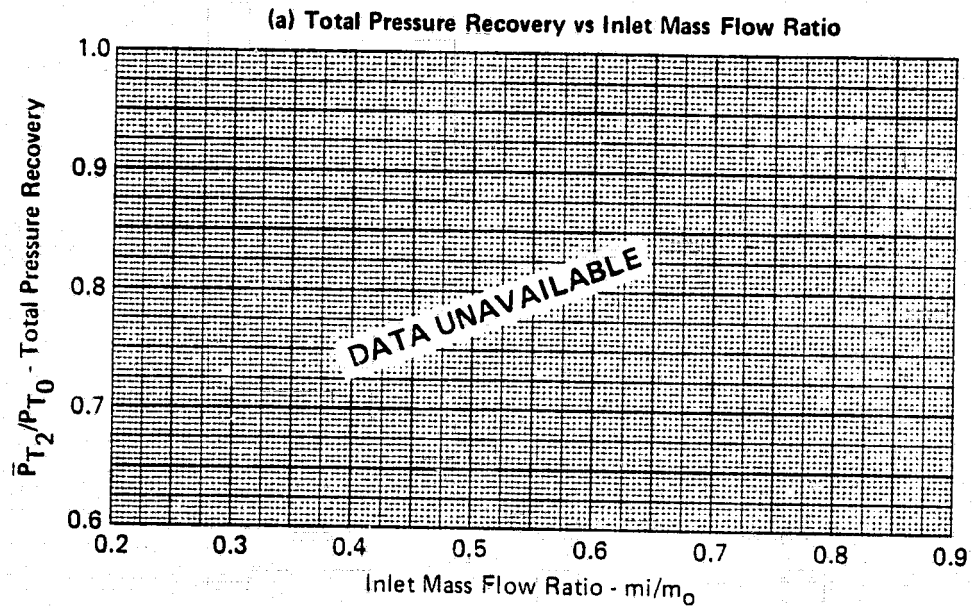
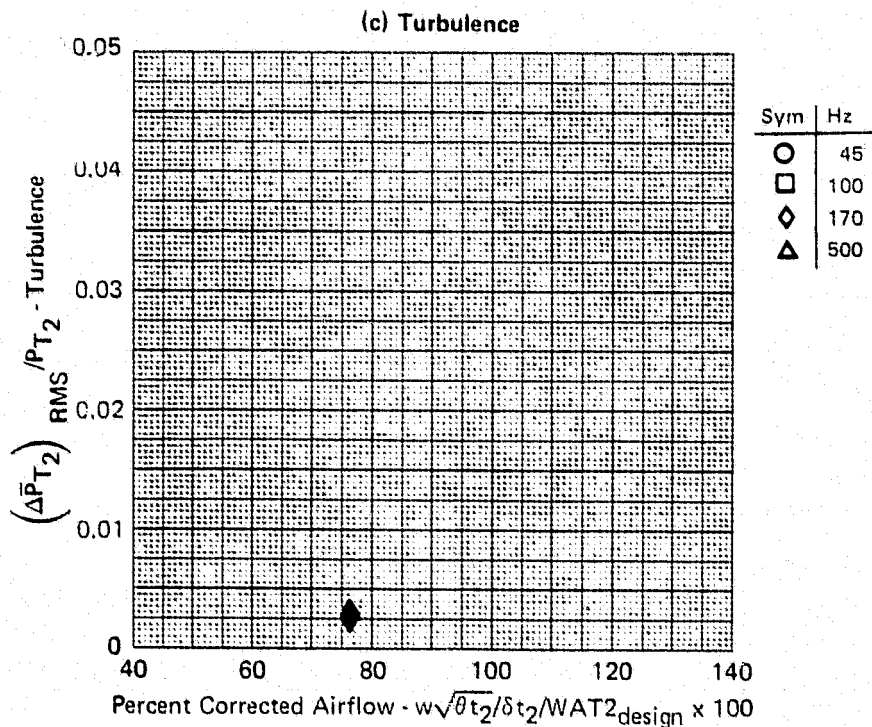


FIGURE G-28
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.92, \alpha = 4.2, \beta = 0.1, WAT2 = 76.1 \%$

GP77-0658-1

FLIGHT - NASA Data Study
 Part./Point - 421/5, Ident 28
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00



GP77-0658-5

FIGURE G-28 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.92$, $\alpha = 4.2$, $\beta = 0.1$, $WAT2 = 76.1\%$

FLIGHT - NASA Data Study
 Part/Point - 421/5, Ident 28
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00

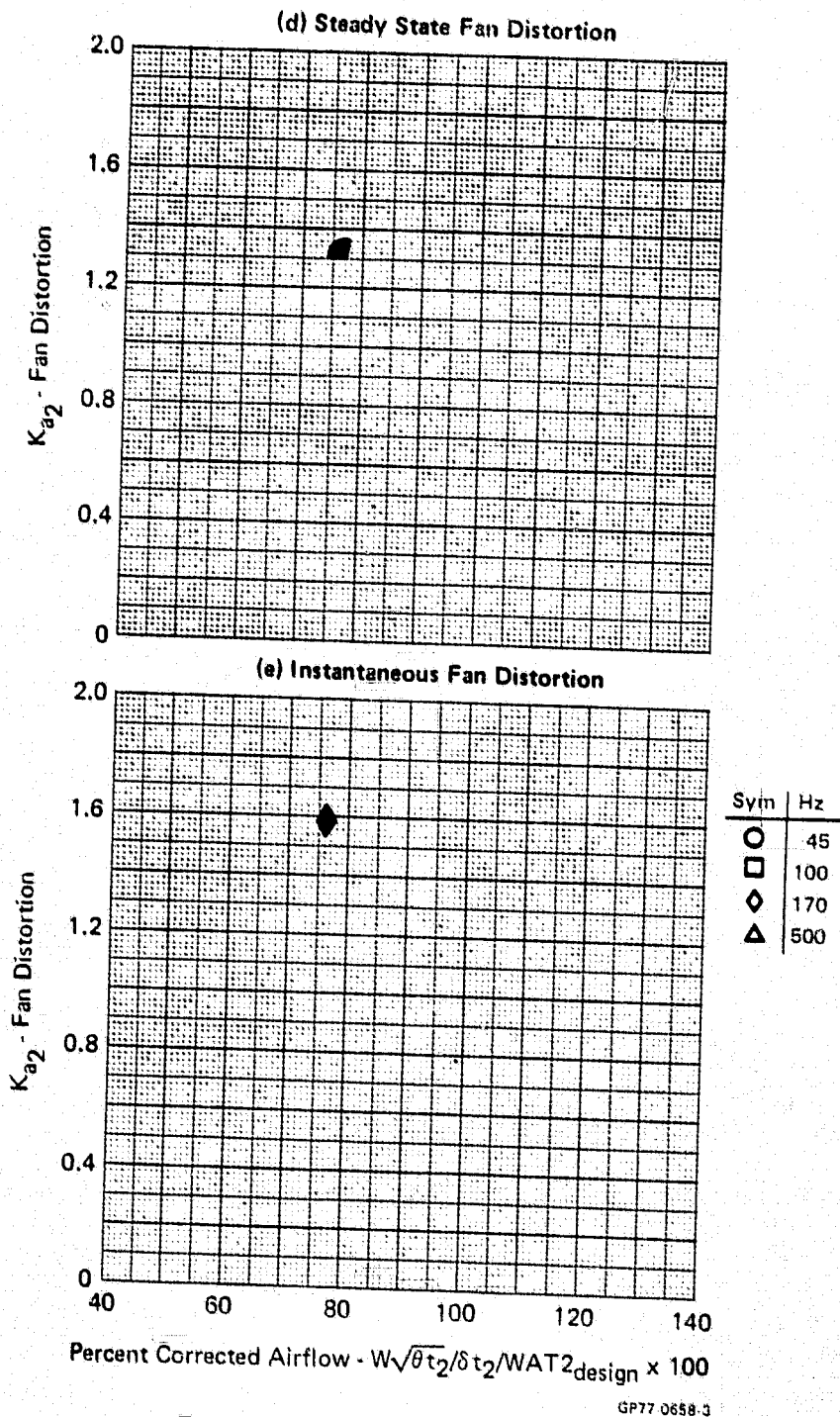


FIGURE G-28 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.92, \alpha = 4.2, \beta = 0.1, WAT2 = 76.1\%$

FLIGHT - NASA Data Study
 Part/Point - 421/5, Ident 28
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00

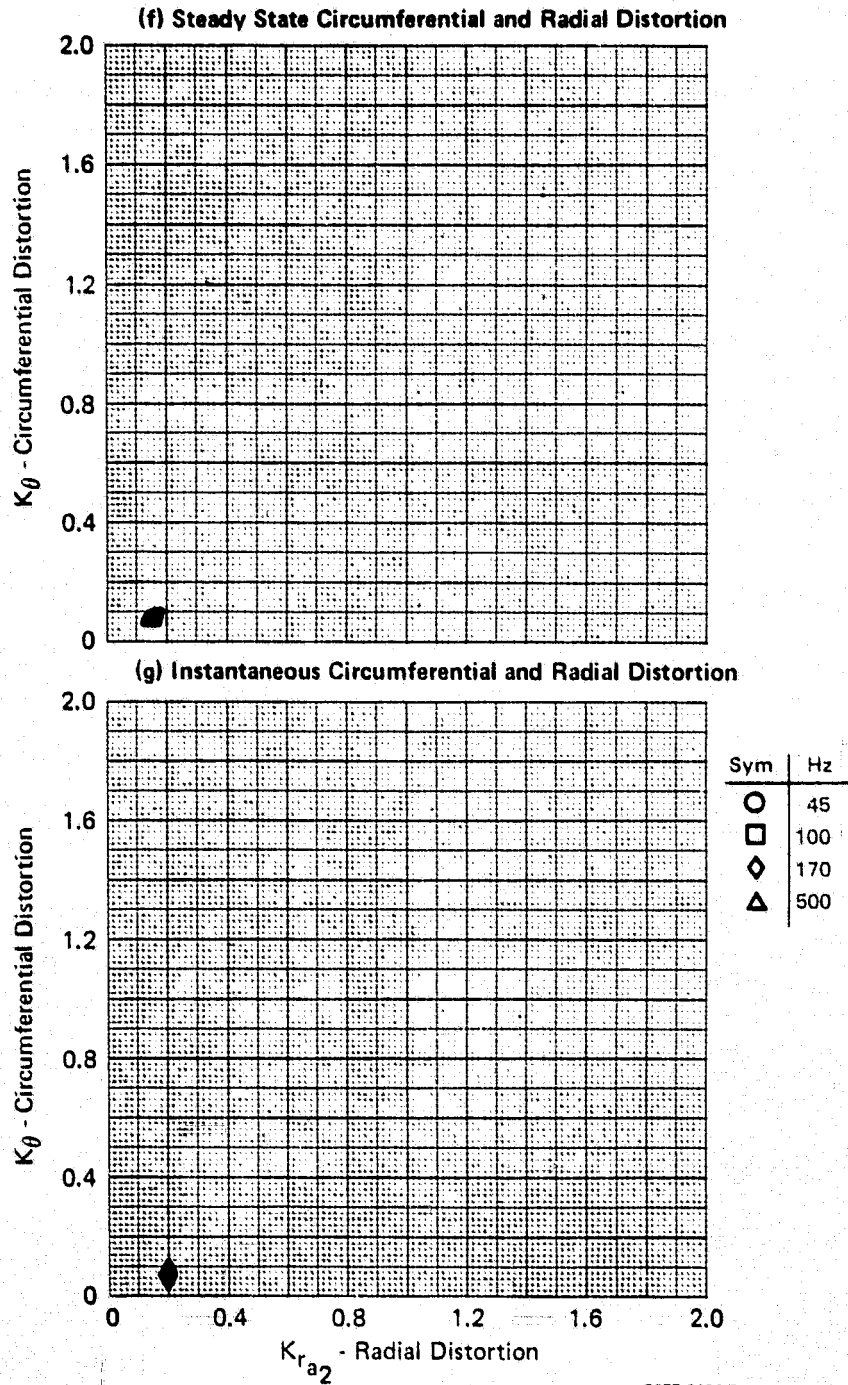


FIGURE G-28 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.92$, $\alpha = 4.2$, $\beta = 0.1$, WAT2 = 76.1 %

FLIGHT - NASA Data Study
 Part/Point - 421/5, Ident 28
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00

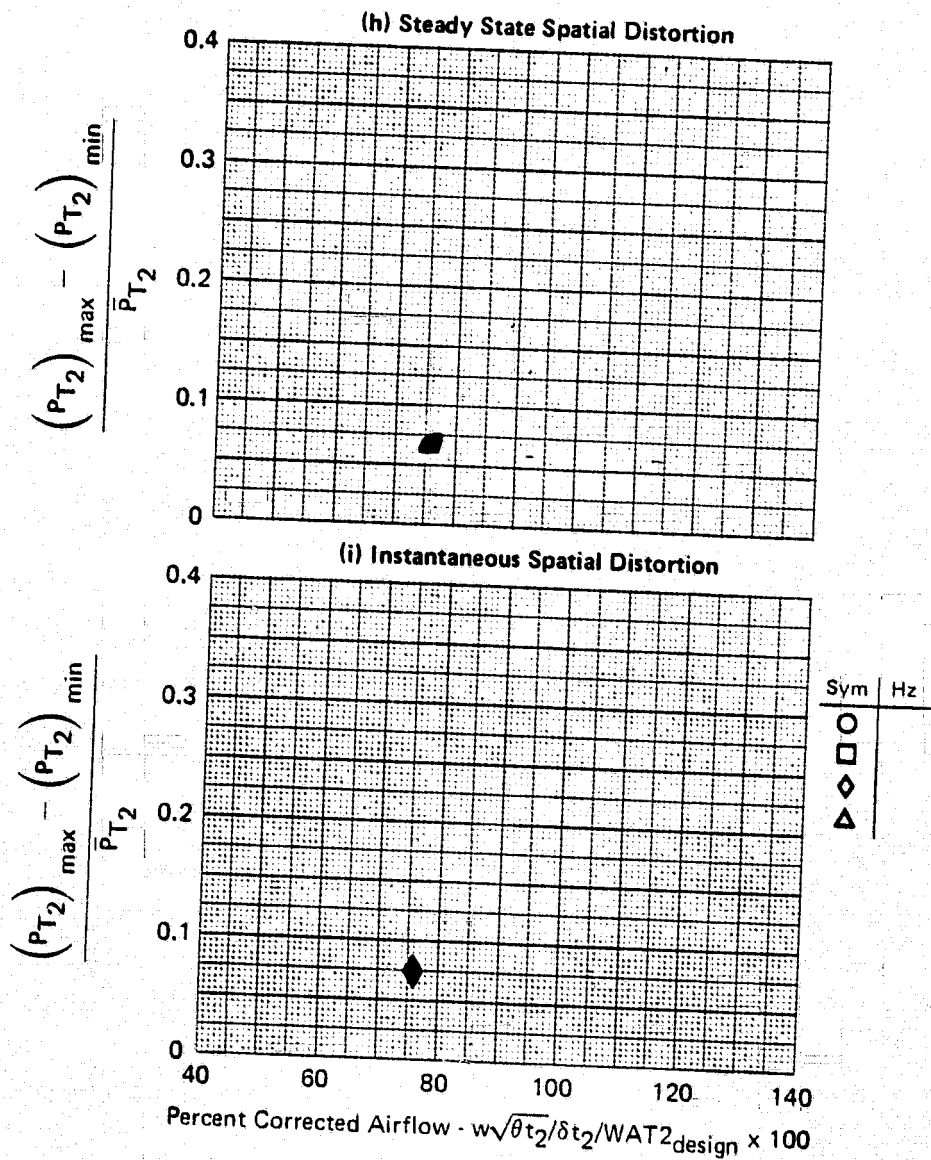


FIGURE G-28 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.92$, $\alpha = 4.2$, $\beta = 0.1$, $WAT2 = 76.1\%$

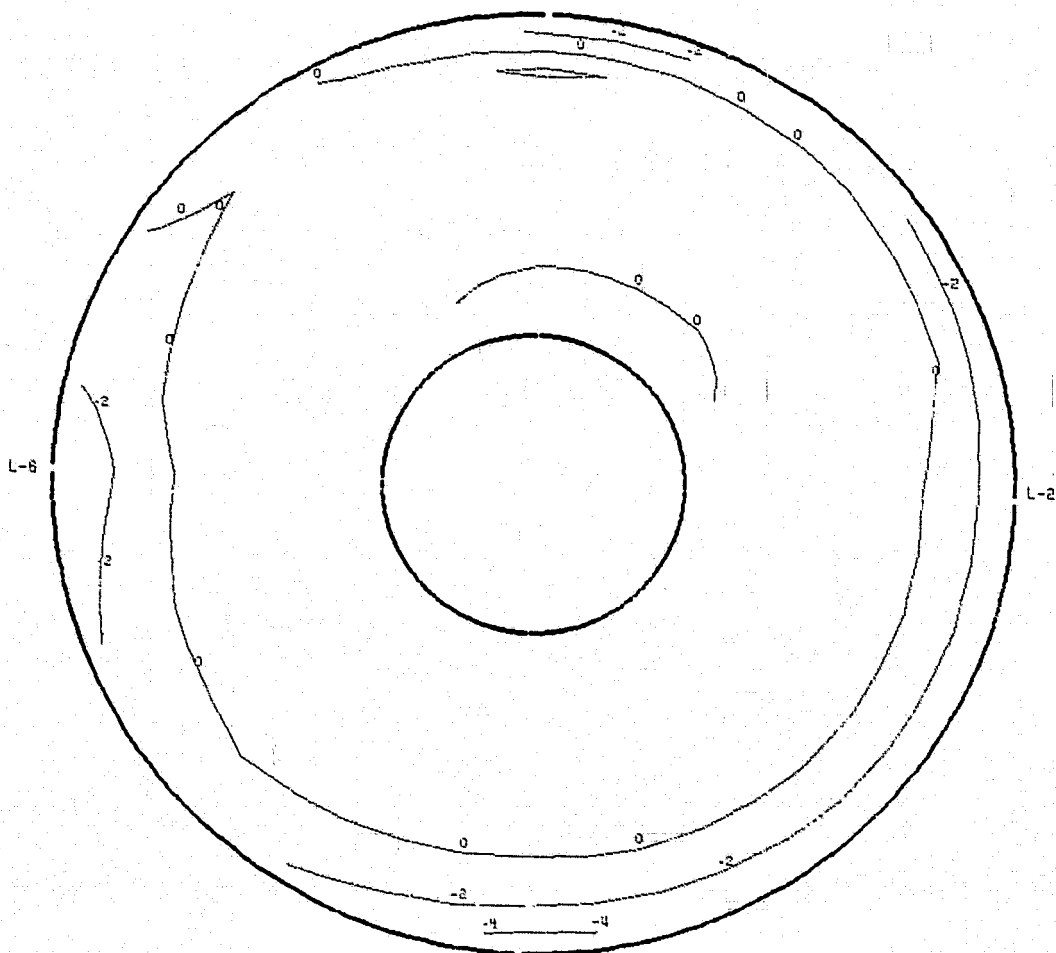
GP77-0658-4

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/5 IDENT. 28
THE SEGMENT START TIME WAS AT 21:05:34.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.92	4.2	0.1	9431(30941)	7.0	11.0	0.0	76.1%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
49.44 (7.17)	1.0	.0763	.1674	1.2678	1.3212	.0406	—	.0664

28(j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 49.44 kPa (7.170 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

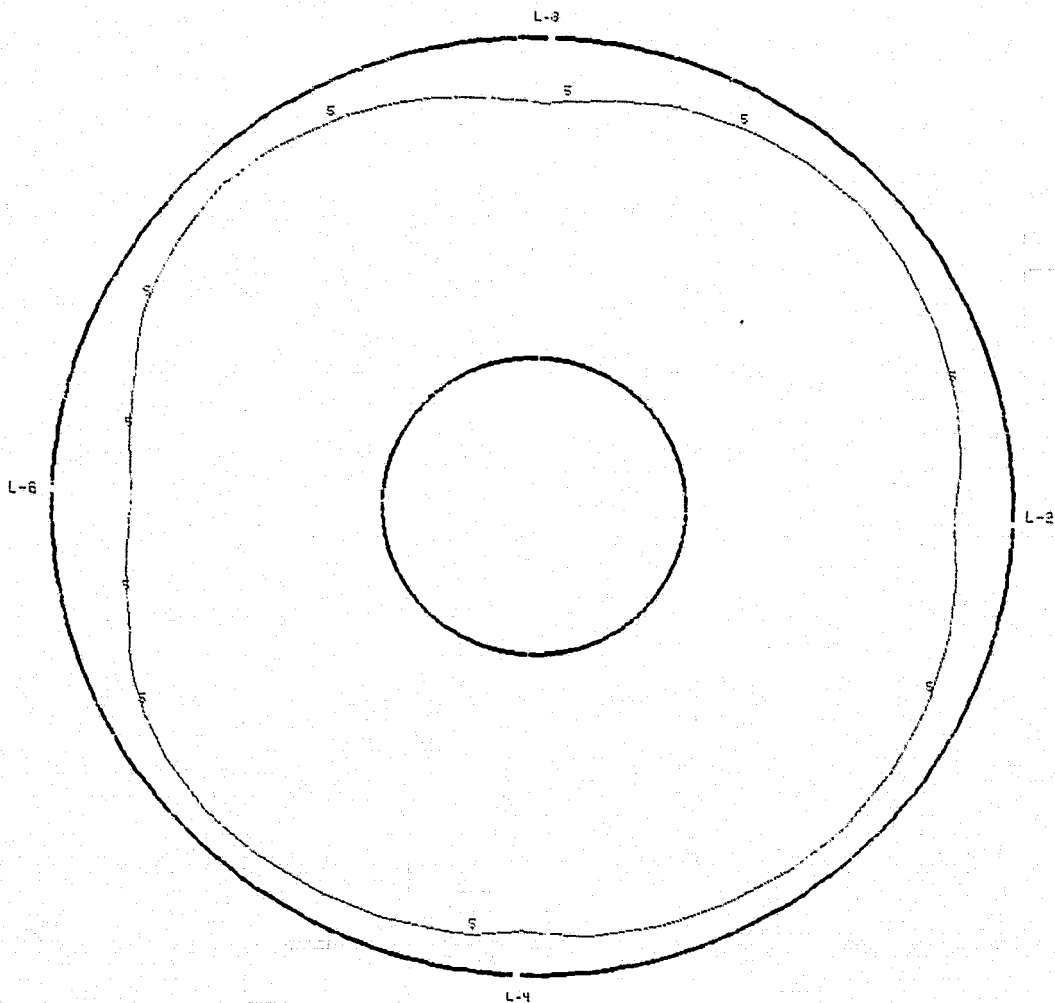
FIGURE G-28 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .92$, $\alpha = 4.2$, $\beta = 0.1$, $WAT2 = 76.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/5 IDENT. 28
THE SEGMENT START TIME WAS AT 21:05:34.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.92	4.2	0.1	9431(30941)	7.0	11.0	0.0	76.1%	-25.00

28(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0027

FIGURE G-28 (Continued)

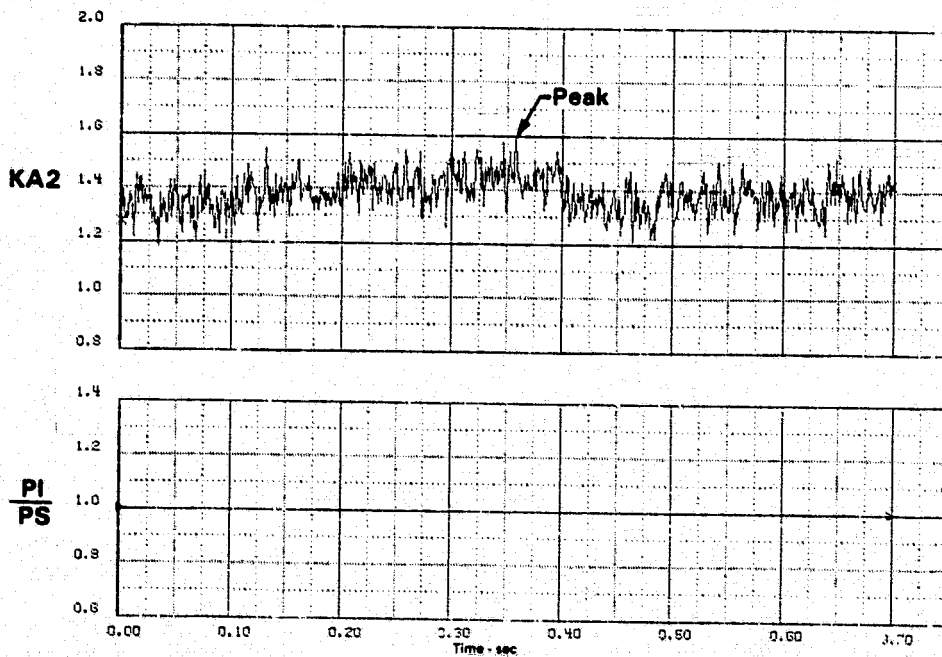
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .92$, $\alpha = 4.2$, $\beta = 0.1$, $WAT2 = 76.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/5 IDENT. 28
THE SEGMENT START TIME WAS AT 21:05:34.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.92	4.2	0.1	9432(30946)	7.0	11.0	0.0	76.1%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
49.37(7.160)	.9986	.0815	.1996	1.5114	1.5929	.0907	.0516	.0763

28 (I) Time History Plots
170 Hz



PEAK AT TIME = 0.35789 SECONDS

FIGURE G-28 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .92$, $\alpha = 4.2$, $\beta = 0.1$, WAT2 = 76.1 %

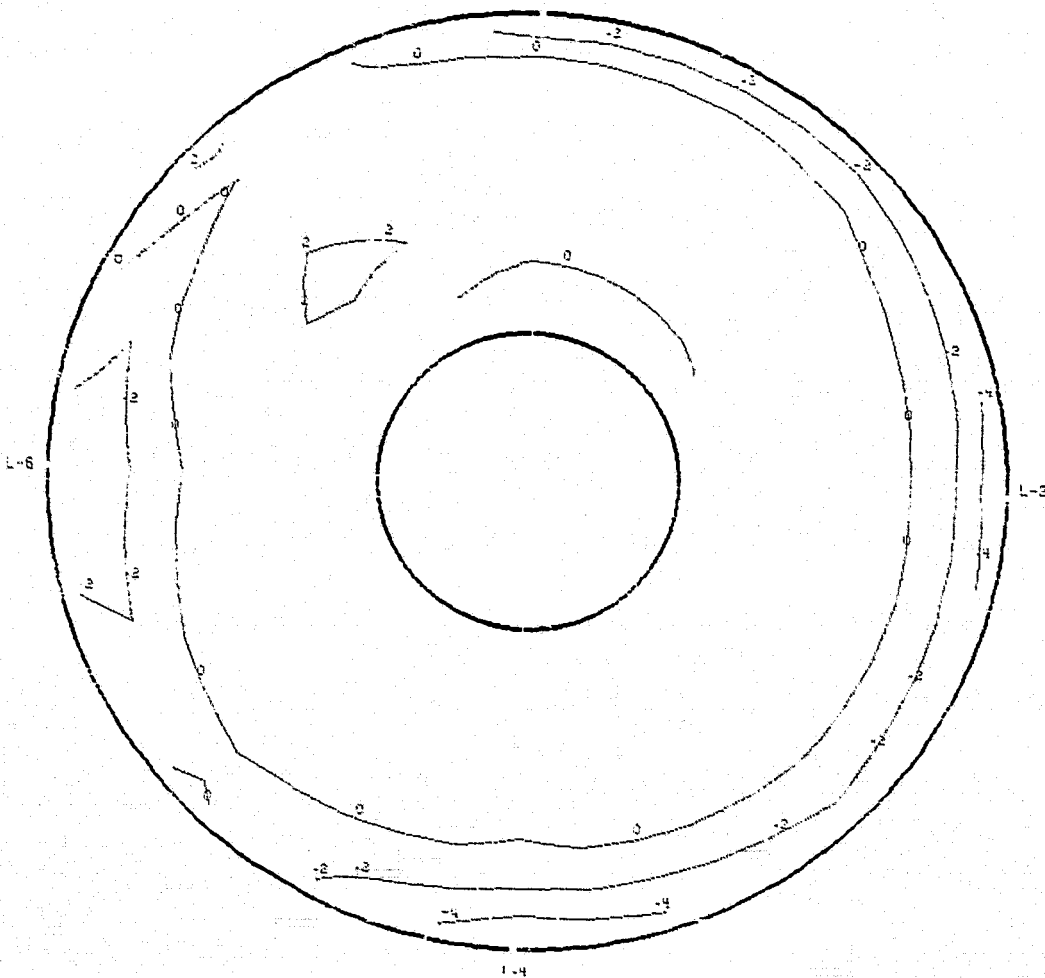
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/5 IDENT. 28
THE SEGMENT START TIME WAS AT 21:05:34.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.92	4.2	0.1	9432(30945)	7.0	11.0	0.0	76.1%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
49.37(7.160)	.9986	.0815	.1996	1.5114	1.5929	.0907	.0516	.0763

28(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 49.37 kPa (7.160 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.35789 SECONDS

FIGURE G-28 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .92$, $\alpha = 4.2$, $\beta = 0.1$, $WAT2 = 76.1\%$

FLIGHT - NASA Data Study
 Part/Point - 424/9, Ident 29
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -12.037

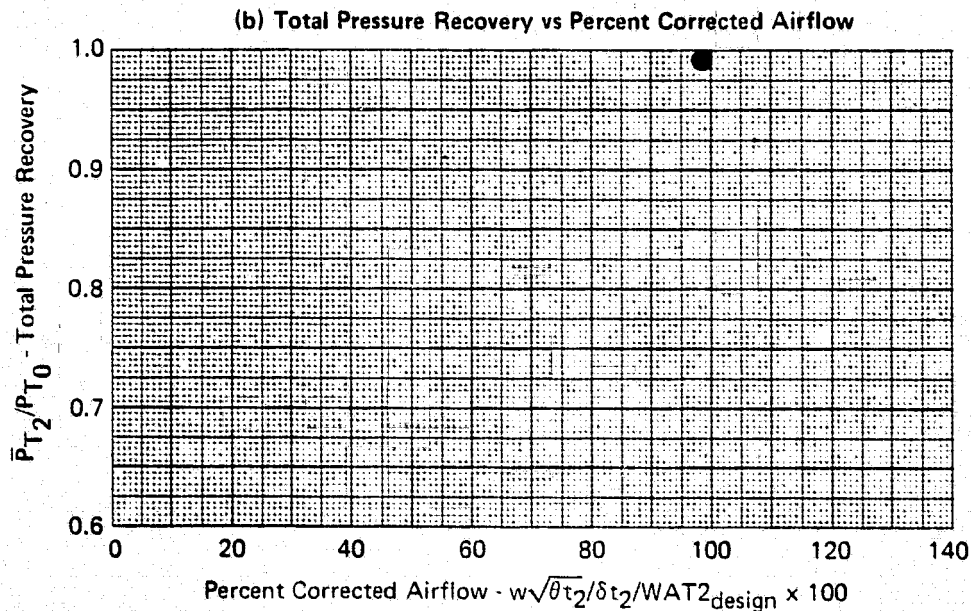
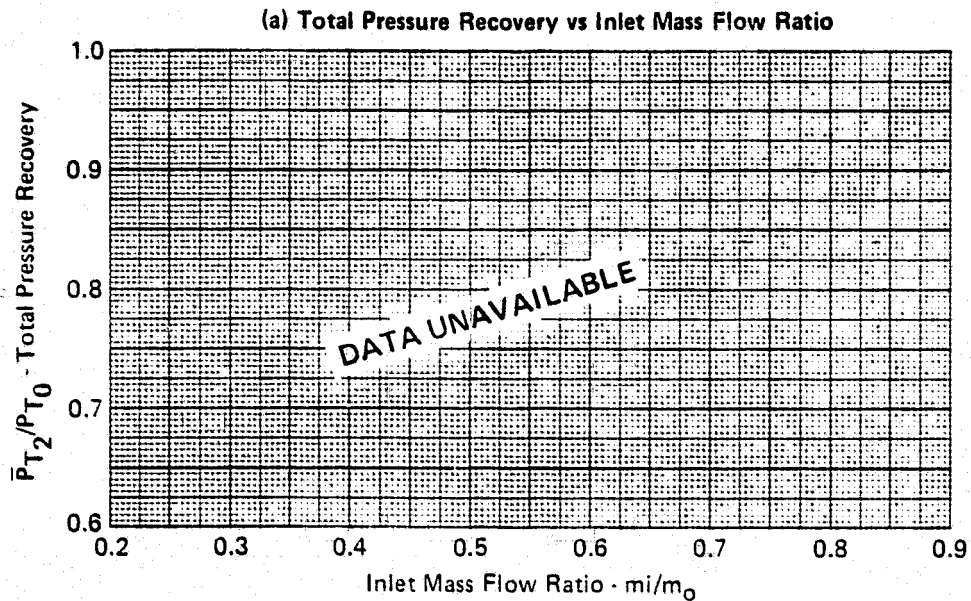
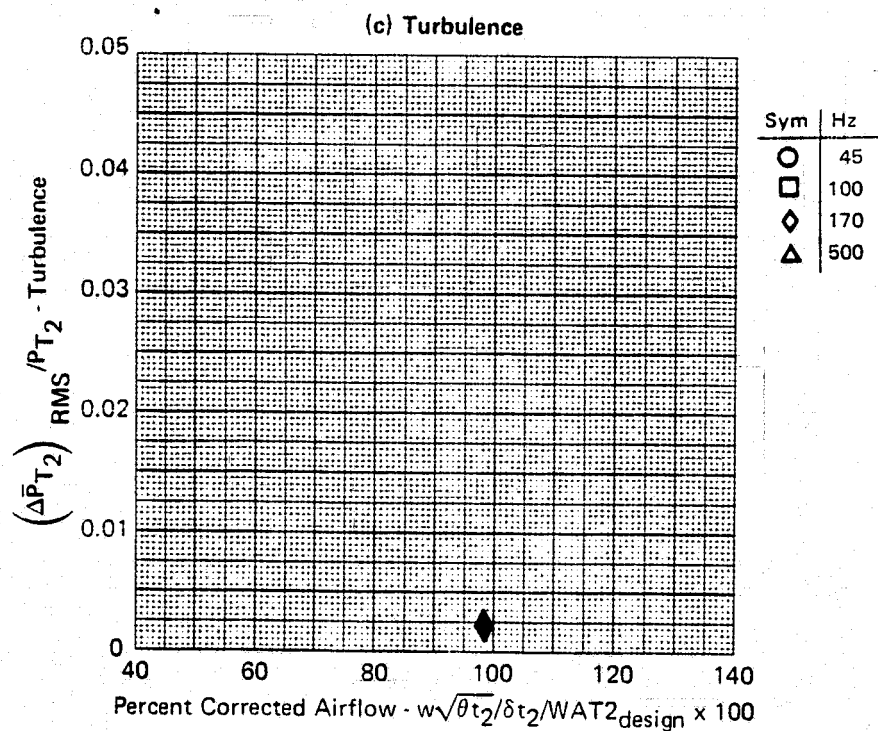


FIGURE G-29
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = 4.1, \beta = 0.5, WAT2 = 98.6 \%$

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FLIGHT - NASA Data Study
 Part/Point - 424/9, Ident 29
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -12.037



GP77-0658-5

FIGURE G-29 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = 4.1$, $\beta = 0.5$, $WAT2 = 98.6\%$

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FLIGHT - NASA Data Study
 Part/Point - 424/9, Ident 29
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -12.037

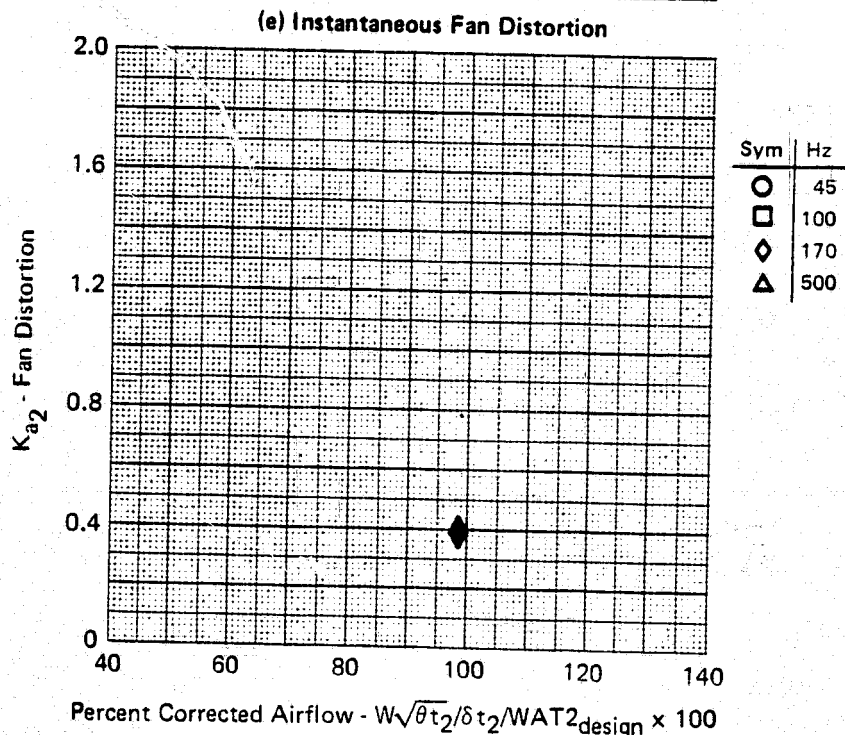
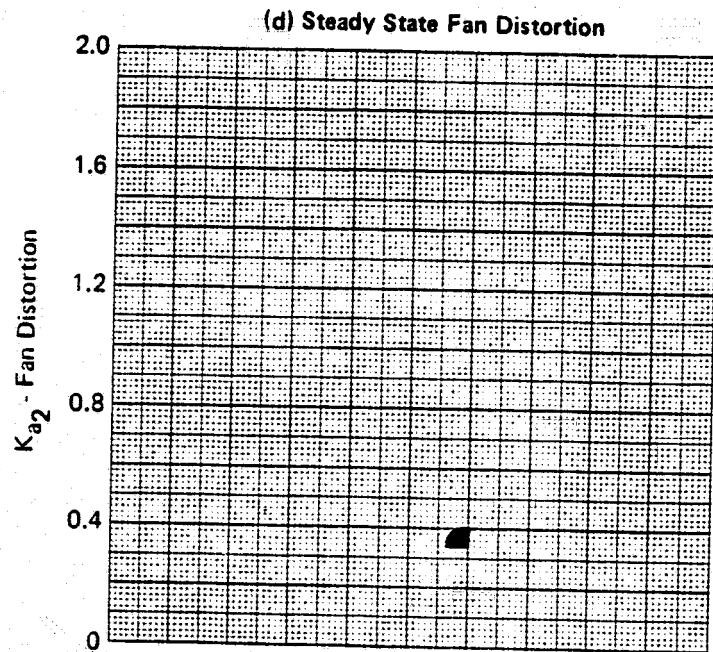
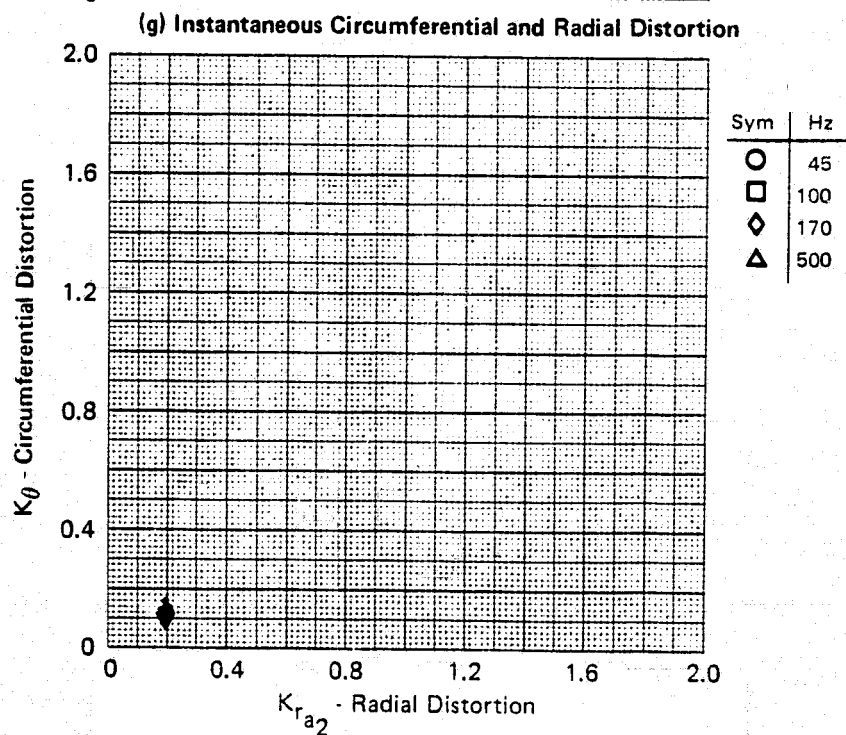
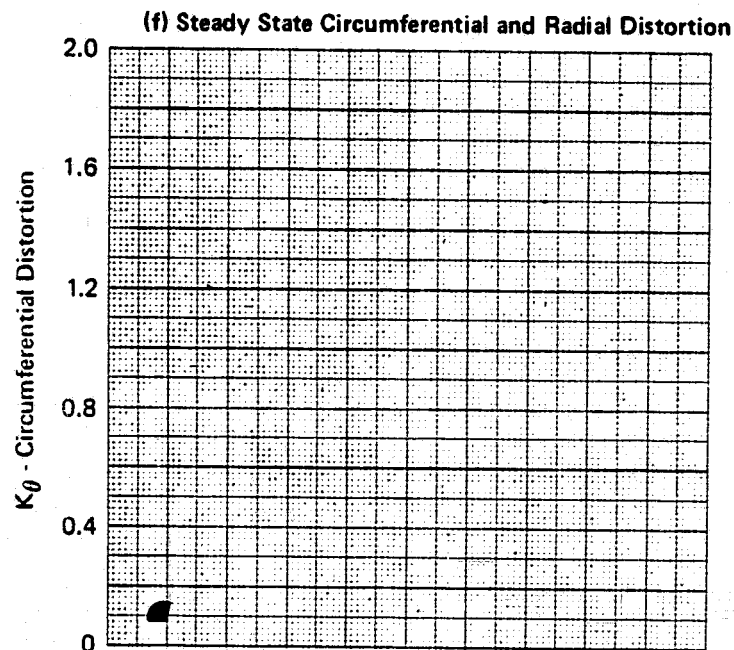


FIGURE G-29 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 4.1$, $\beta = 0.5$, $WAT2 = 98.6\%$

GP77-0658-3

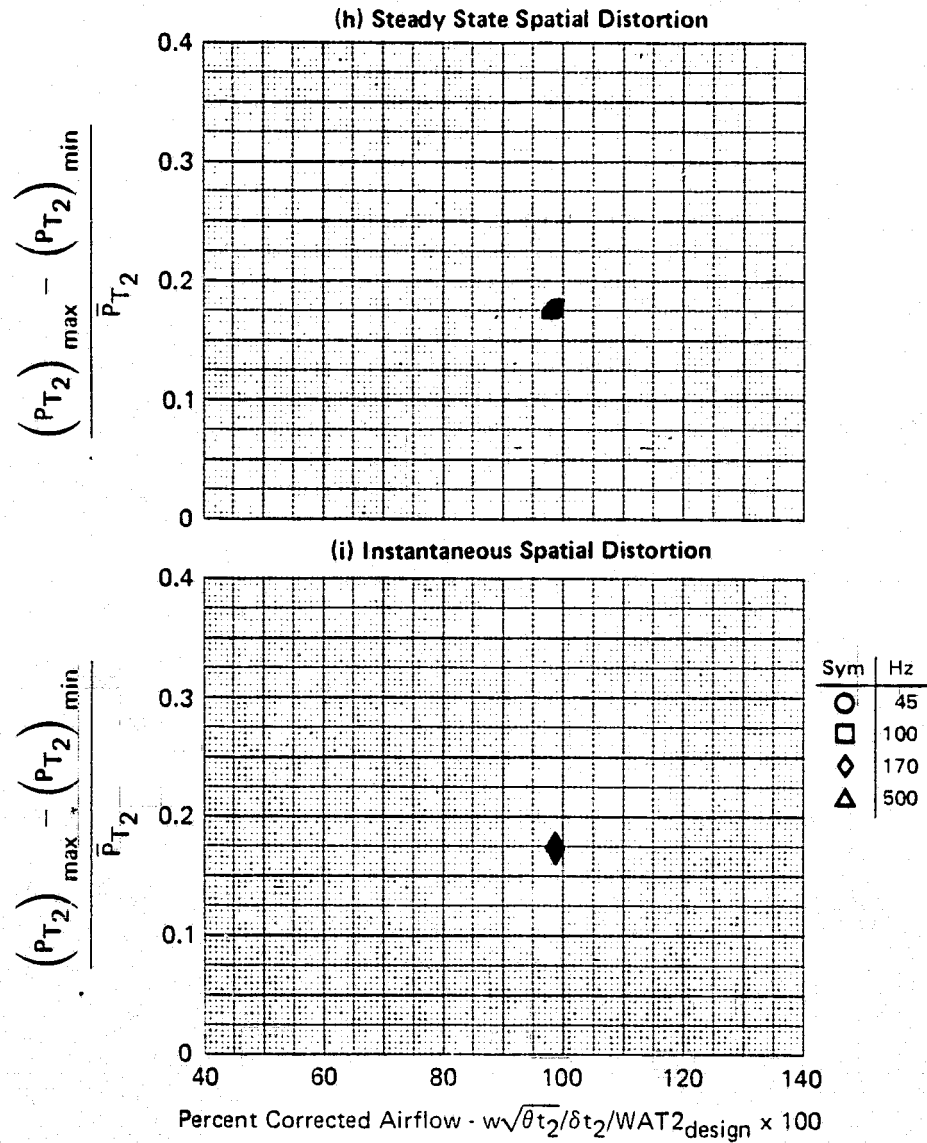
FLIGHT - NASA Data Study
 Part/Point - 424/9, Ident 29
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -12.037



GP77-0658-2

FIGURE G-29 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = 4.1$, $\beta = 0.5$, WAT2 = 98.6 %

FLIGHT - NASA Data Study
 Part/Point - 424/9, Ident 29
 RHO DELTA3 BYPASS CIVV
 6.9 11.1 0.0 -12.037



GP77-0658-4

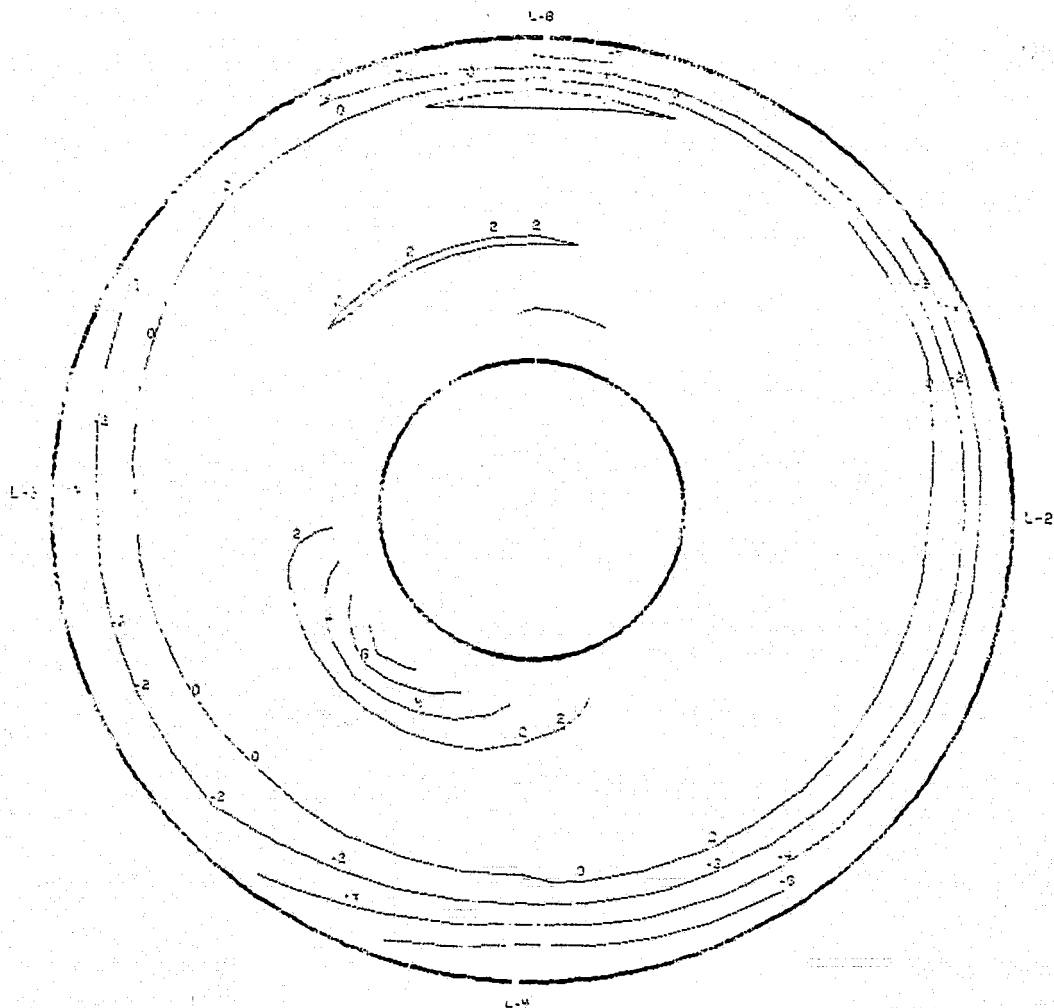
FIGURE G-29 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = 4.1, \beta = 0.5, WAT2 = 98.6 \%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/9 IDENT. 29
THE SEGMENT START TIME WAS AT 04:10:11.186

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	4.1	0.5	9148(30014)	6.9	11.1	0.0	98.6%	-12.037
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
50.45(7.317)	1.0	.1121	.1774	.2528	.3651	.0747	—	.1741

29 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 50.45 kPa (7.317 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

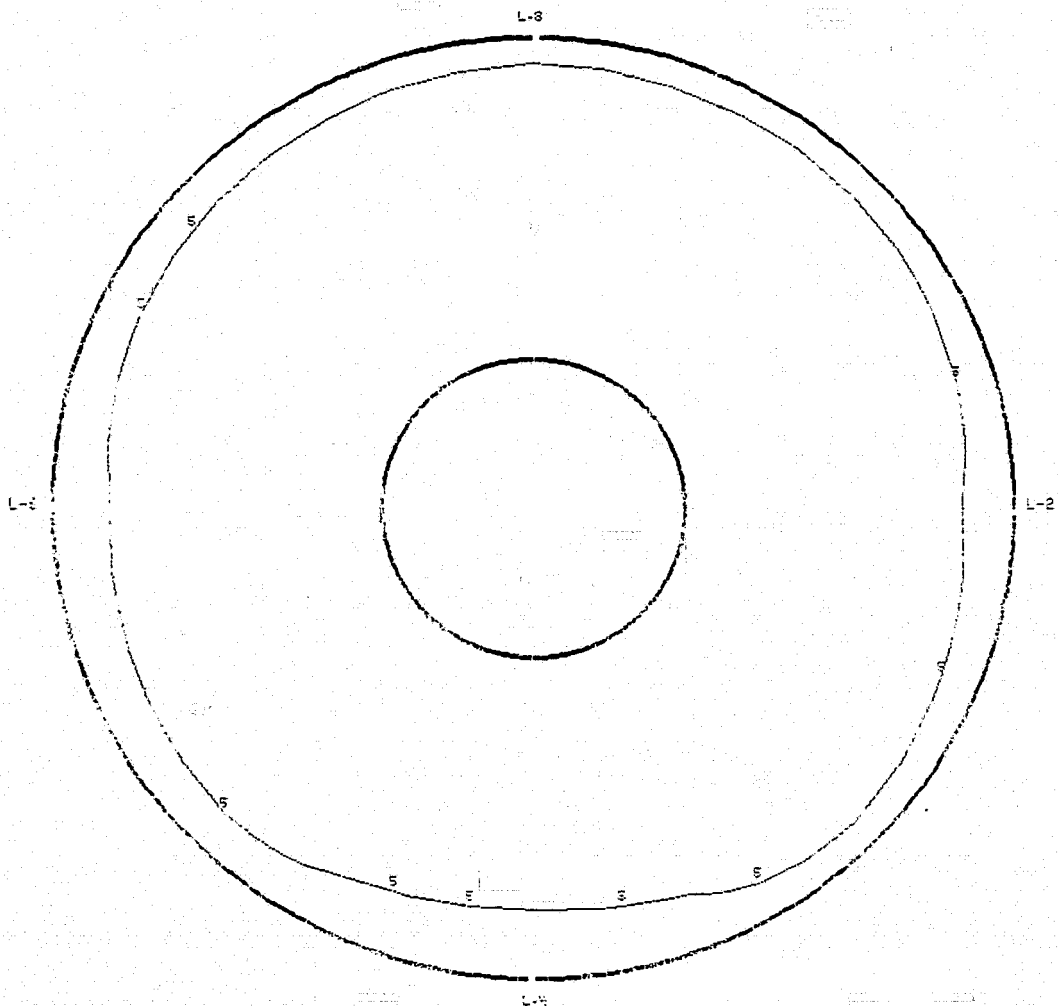
FIGURE G-29 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 4.1$, $\beta = 0.5$, $WAT2 = 98.6\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/9 IDENT. 25
THE SEGMENT START TIME WAS AT 04:10:11.186

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	4.1	0.5	9148(30014)	6.9	11.1	0.0	98.6%	-12.037

29(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0023

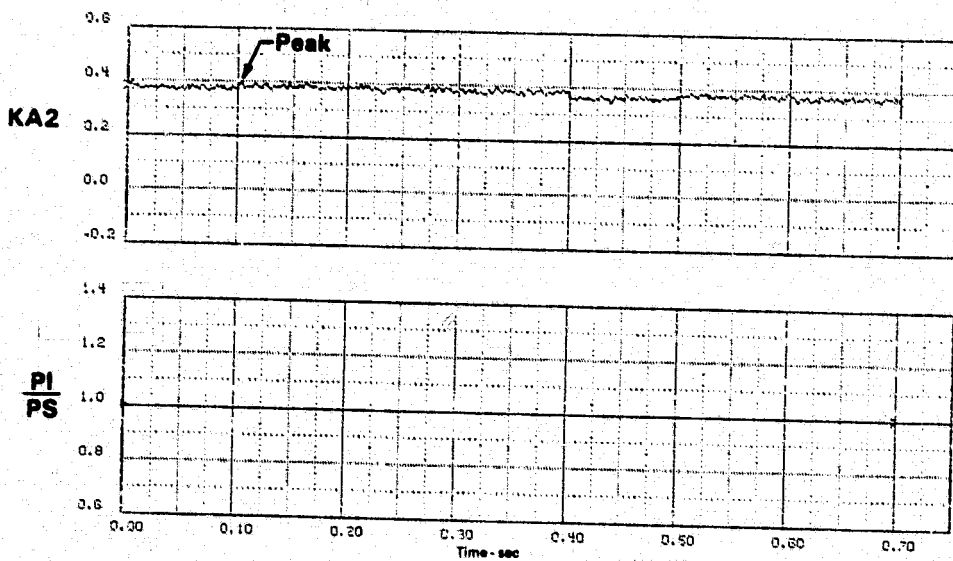
FIGURE G-29 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .90$, $\alpha = 4.1$, $\beta = 0.5$, $WAT2 = 98.6\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/9 IDENT. 29
THE SEGMENT START TIME WAS AT 04:10:11.186

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	4.1	0.5	9151(30022)	6.9	11.1	0.0	98.6%	-12.037
PI	PI/PS	KTHETA	KHA2	BKRA2	KA2	KC2	KOSP	D2
50.40(7.31)	.9990	.1228	.1928	.2743	.3971	.0840	.1097	.1731

29(I) Time History Plots
170 Hz



PEAK AT TIME = 0.10333 SECONDS

FIGURE G-29 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 4.1$, $\beta = 0.5$, $WAT2 = 98.6\%$

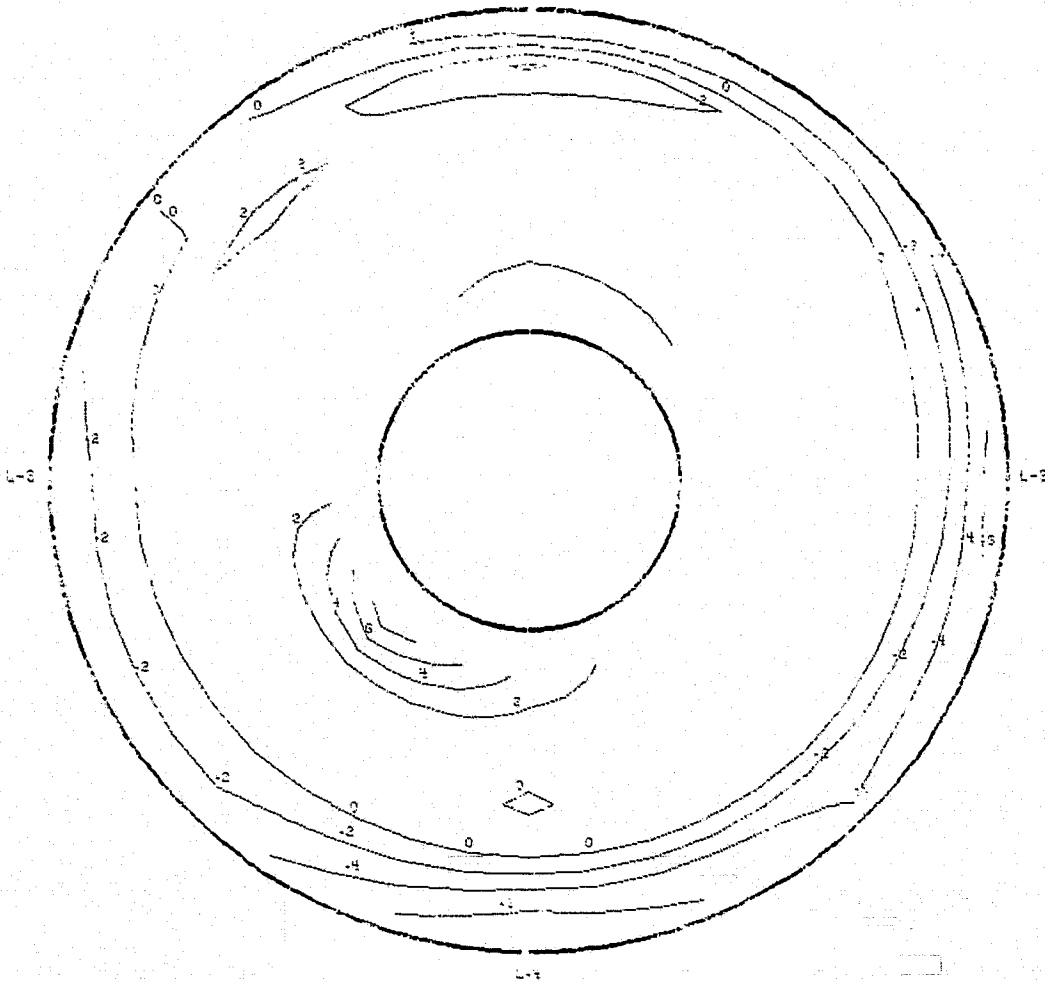
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/9 IDENT. 29
THE SEGMENT START TIME WAS AT 04:10:11.186

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CMV
.90	4.1	0.5	9151(30022)	6.9	11.1	0.0	98.6%	-12.037
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
50.40(7.31)	.9990	.1228	.1925	.2743	.3971	.0840	.1097	.1731

29(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 50.40 kPa (7.310 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.10333 SECONDS

FIGURE G-29 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 4.1$, $\beta = 0.5$, $WAT2 = 98.6\%$

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FLIGHT - NASA Data Study
Part/Point - 421/4, Ident 30

RHO	DELTA3	BYPASS	CIVV
7.0	11.0	0.0	-5.00

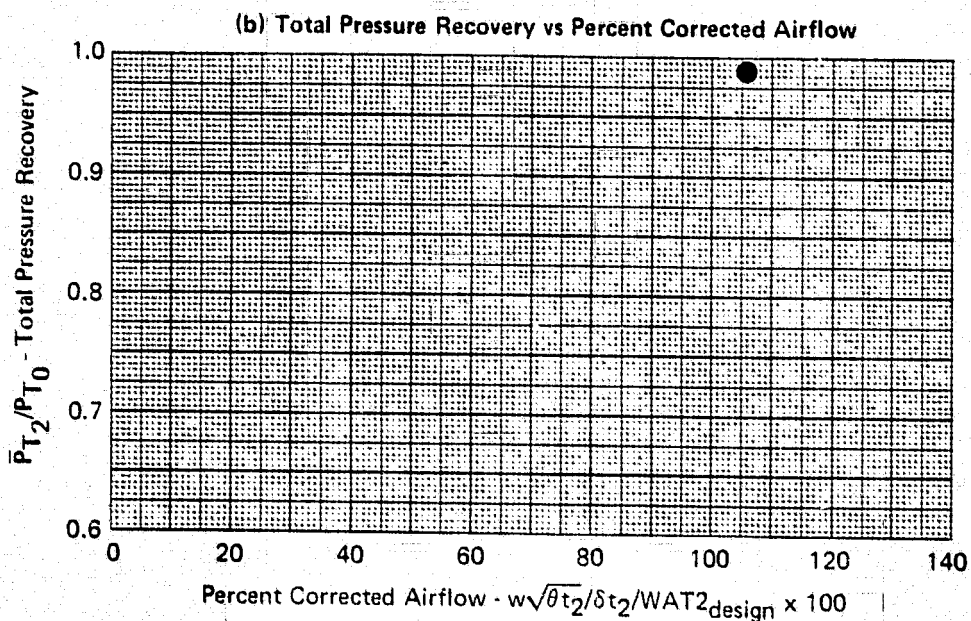
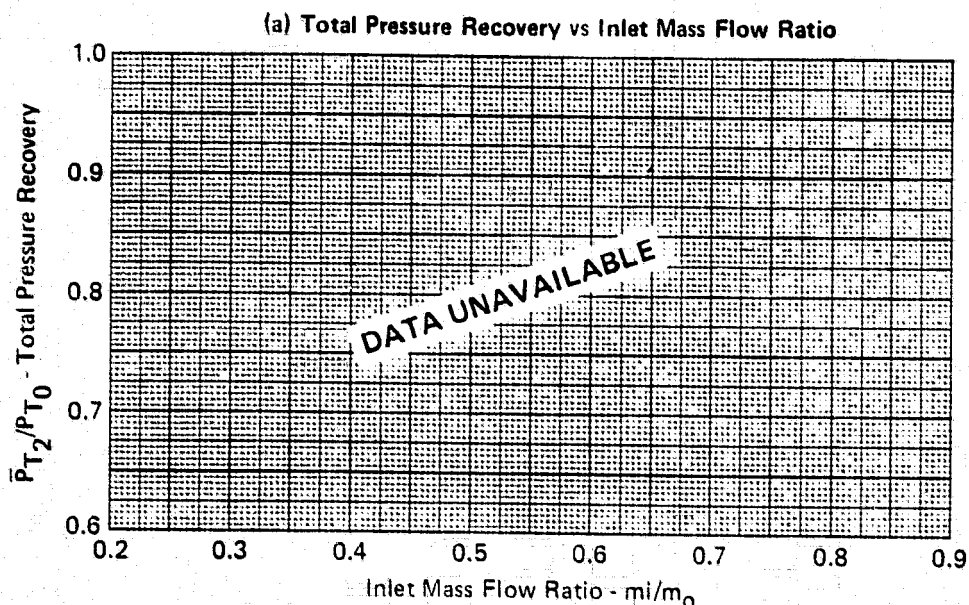
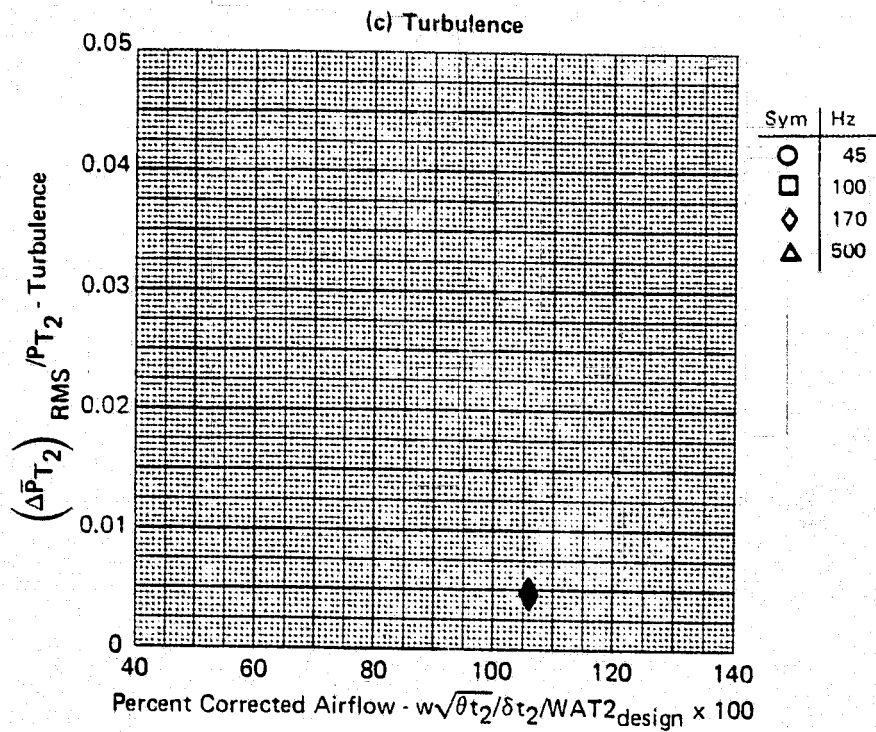


FIGURE G-30
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90, \alpha = 5.1, \beta = 0.1, WAT2 = 105.7 \%$

GP77-0858-1

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FLIGHT - NASA Data Study
 Part/Point - 421/4, Ident 30
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -5.00



GP77-0658-5

FIGURE G-30 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 5.1$, $\beta = 0.1$, $WAT2 = 105.7\%$

FLIGHT - NASA Data Study
 Part/Point - 421/4, Ident 30
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -5.00

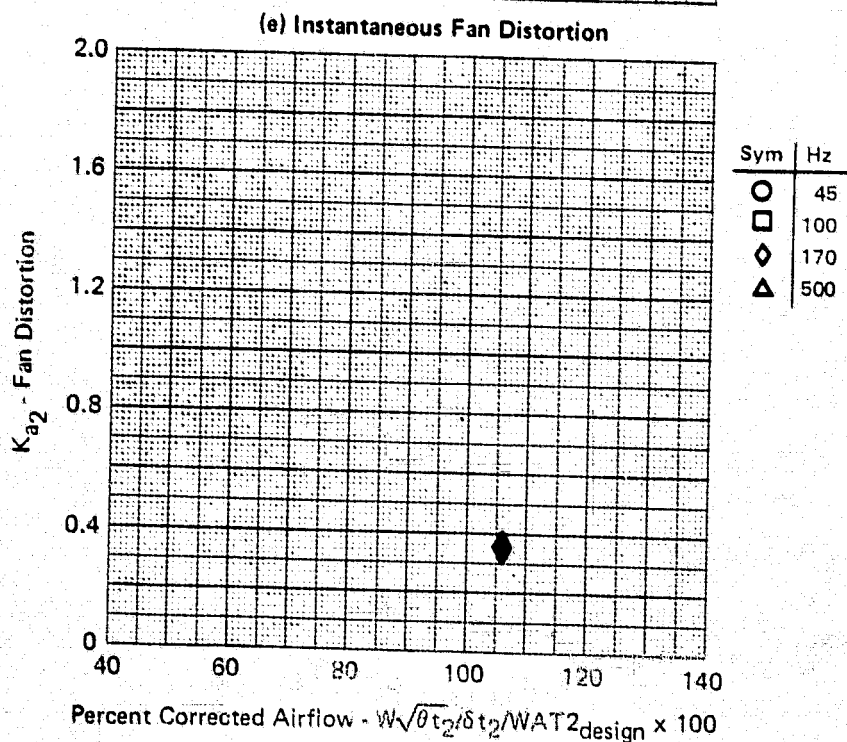
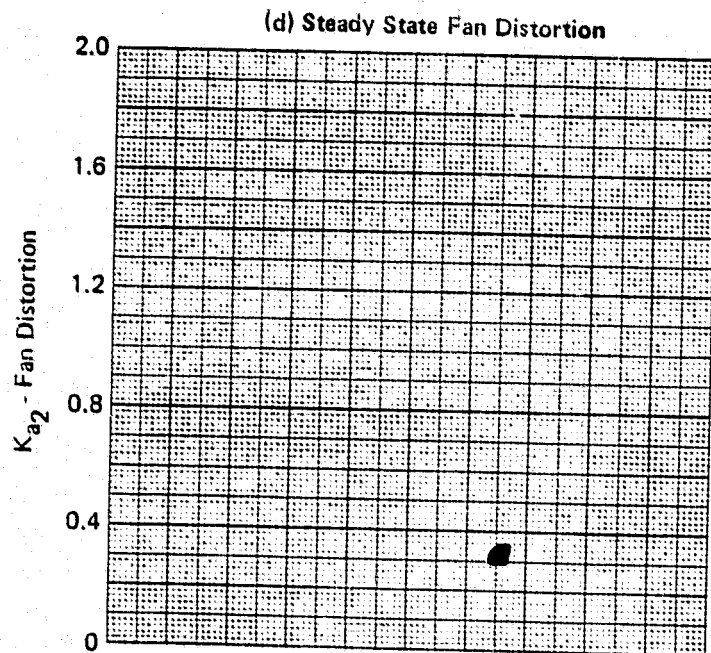
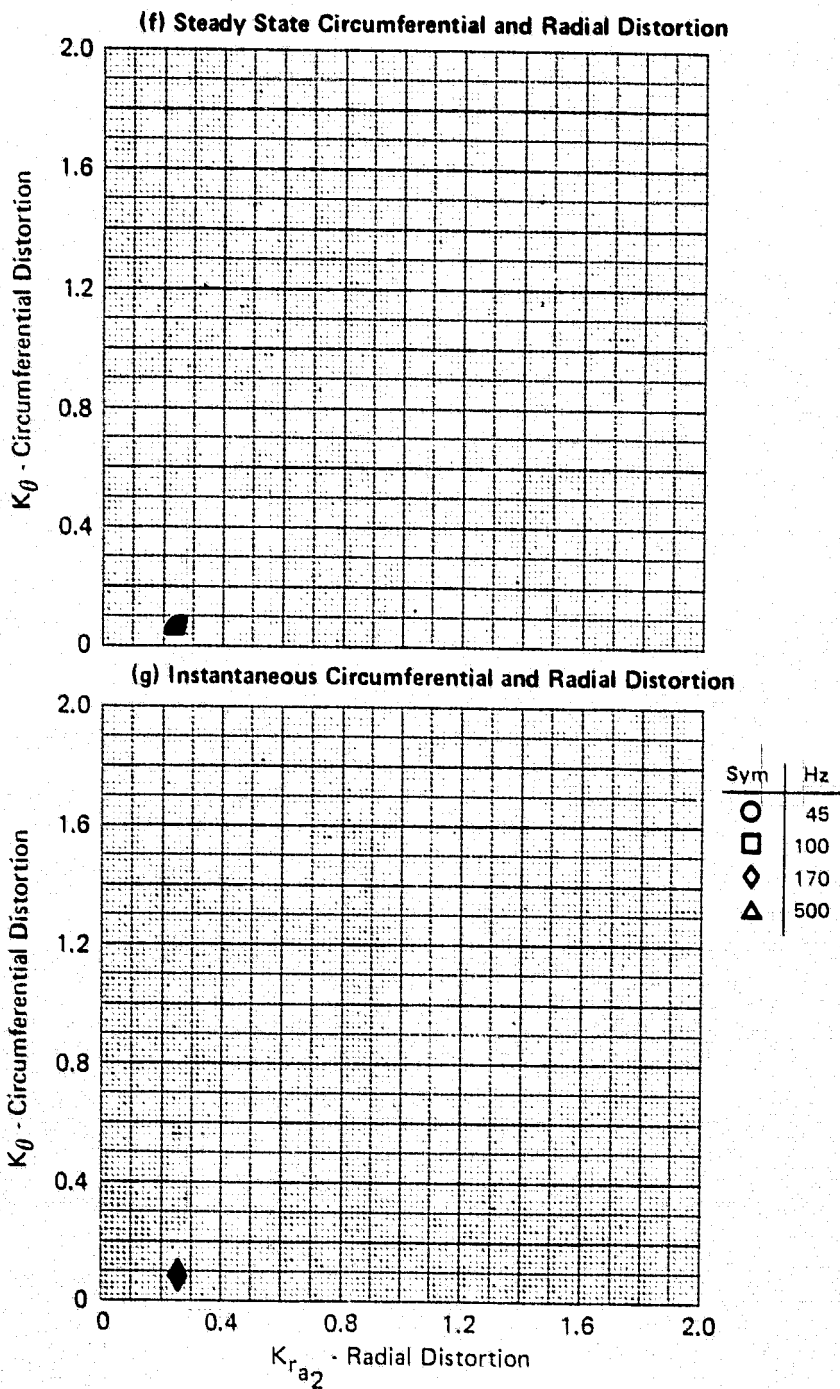


FIGURE G-30 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 5.1$, $\beta = 0.1$, $WAT2 = 105.7\%$

GP77-0658-3

FLIGHT - NASA Data Study
 Part/Point - 421/4, Ident 30
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -5.00



GP77-0658-2

FIGURE G-30 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 5.1$, $\beta = 0.1$, $WAT2 = 105.7\%$

FLIGHT - NASA Data Study
 Part/Point - 421/4, Ident 30
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -5.00

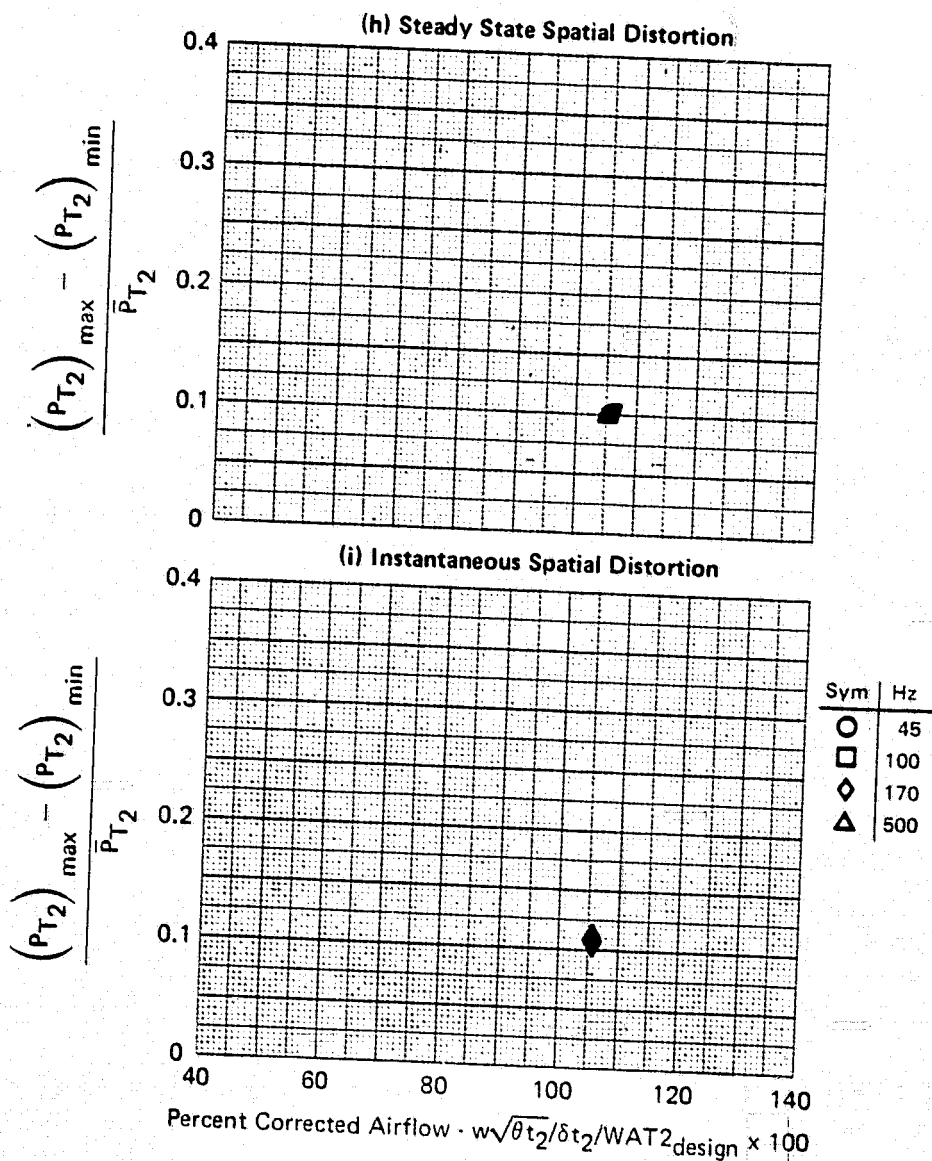


FIGURE G-30 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90, \alpha = 5.1, \beta = 0.1, WAT2 = 105.7\%$

GP77-0658-4

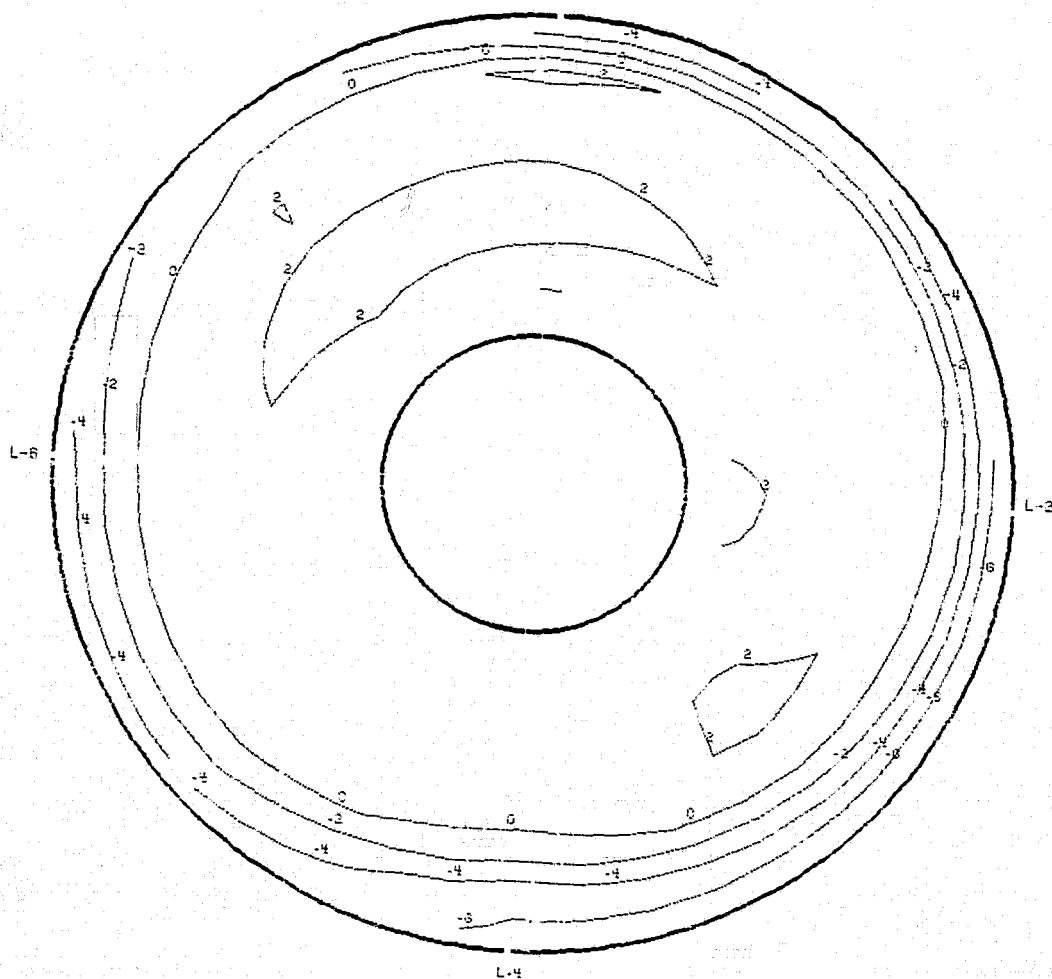
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/4 IDENT.30
THE SEGMENT START TIME WAS AT 21:05:18.490

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	5.1	0.1	9410(30874)	7.0	11.0	0.0	105.7%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
48.17(6.987)	1.0	.0633	.2446	.2510	.3154	.0229		.0993

30(j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 48.17 kPa (6.987 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

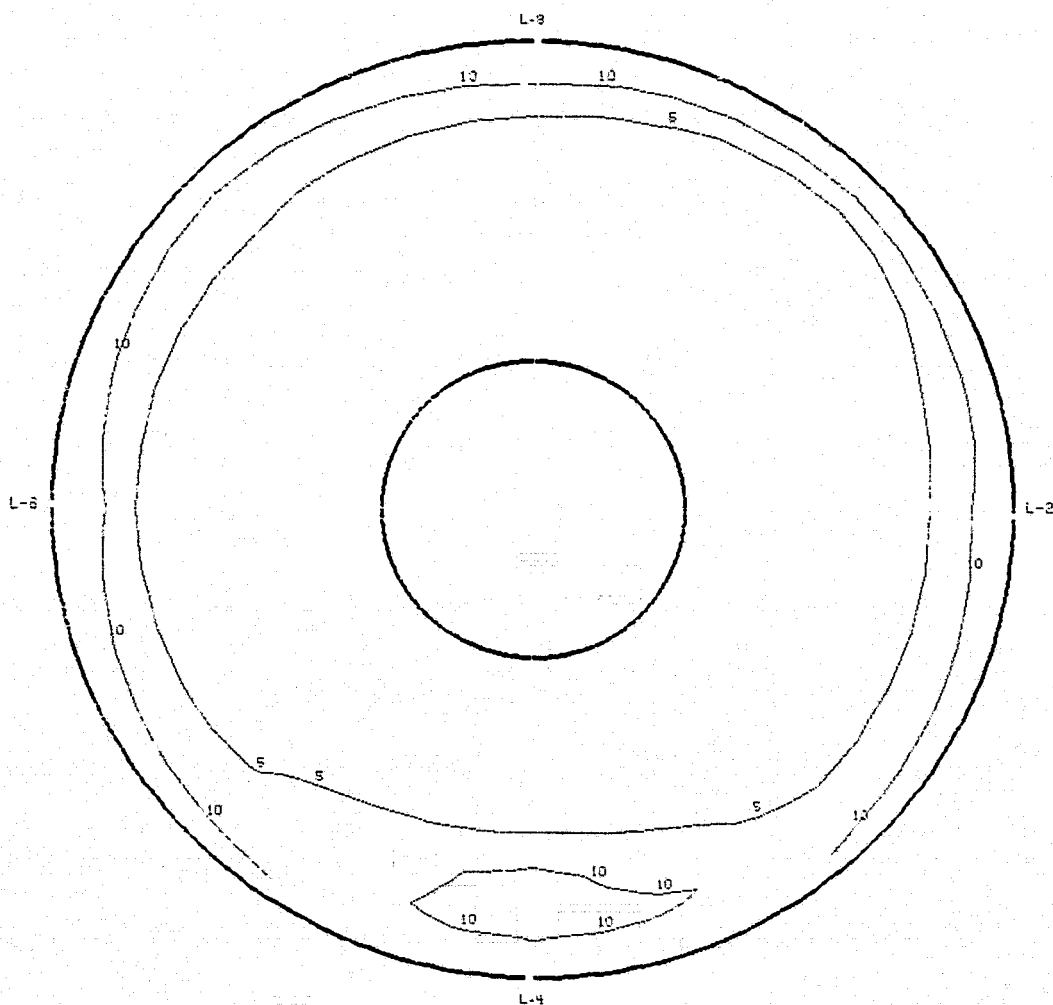
FIGURE G-30 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 5.1$, $\beta = 0.1$, $WAT2 = 105.7\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/4 IDENT. 30
THE SEGMENT START TIME WAS AT 21:05:18.490

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	5.1	0.1	9410(30874)	7.0	11.0	0.0	105.7%	-5.000

30(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0047

FIGURE G-30 (Continued)

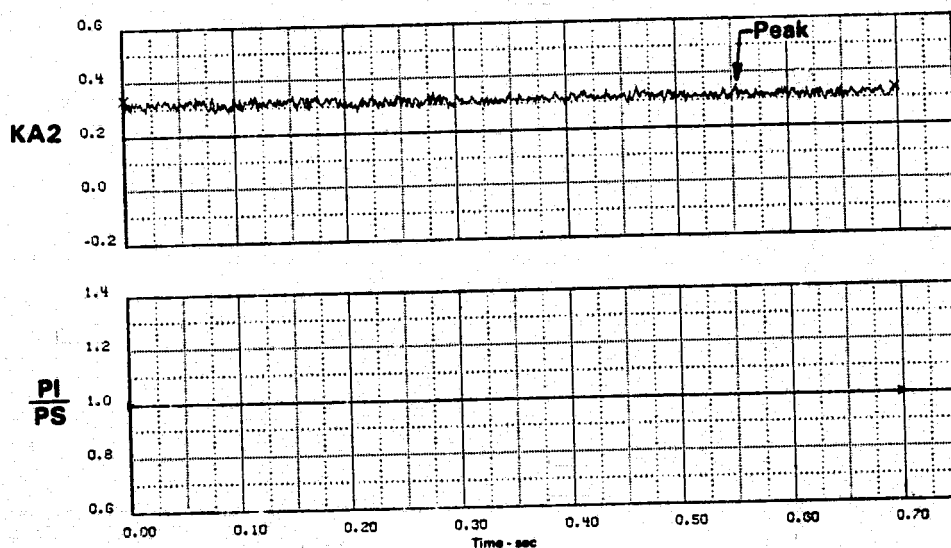
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 5.1$, $\beta = 0.1$, $WAT2 = 105.7\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/4 IDENT. 30
THE SEGMENT START TIME WAS AT 21:08:18.490

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	5.1	0.1	9411(30875)	7.0	11.0	0.0	105.7%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
48.26(7.00)	1.002	.0880	.2538	.2604	.3492	.0580	.0487	.1104

30(I) Time History Plots
170 Hz



PEAK AT TIME = 0.55355 SECONDS

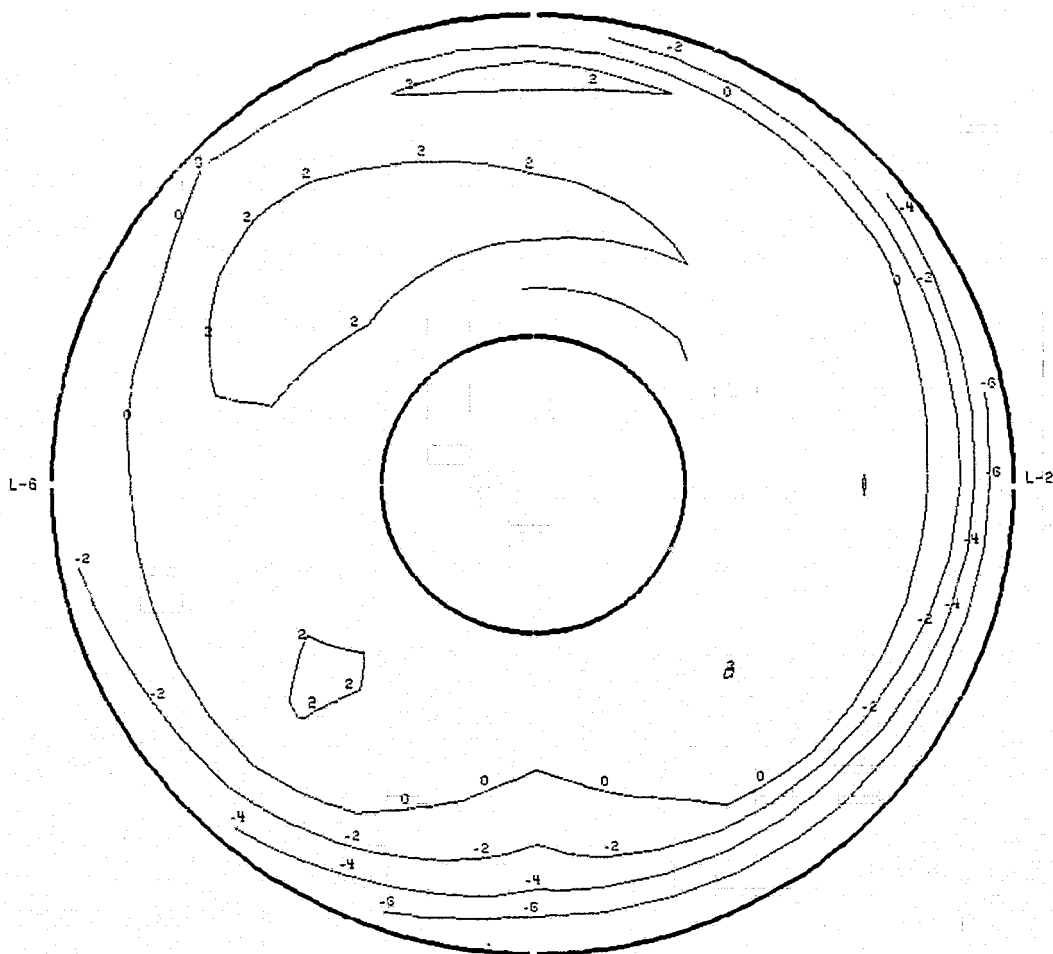
FIGURE G-30 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 5.1$, $\beta = 0.1$, $WAT2 = 105.7\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/4 IDENT. 30
THE SEGMENT START TIME WAS AT 21:05:18.490

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	5.1	0.1	9411(30875)	7.0	11.0	0.0	105.7%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	O2
48.26(7.00)	1.002	.0880	.2538	.2604	.3492	.0580	.0487	.1104

30(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 48.26 kPa (7.000 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.55355 SECONDS

FIGURE G-30 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 5.1$, $\beta = 0.1$, WAT2 = 105.7 %

FLIGHT - NASA Data Study
 Part/Point - 421/6, Ident 31
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00

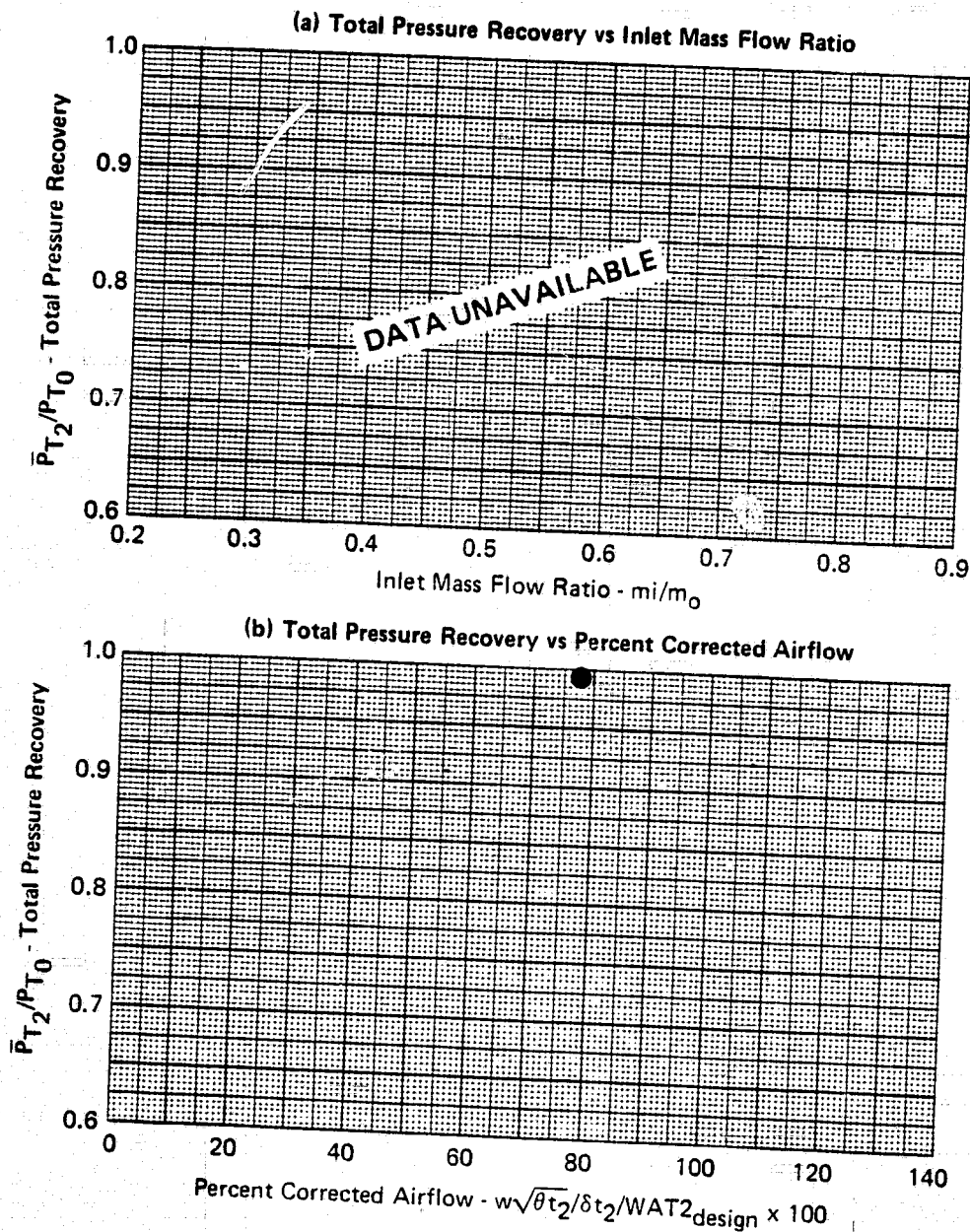
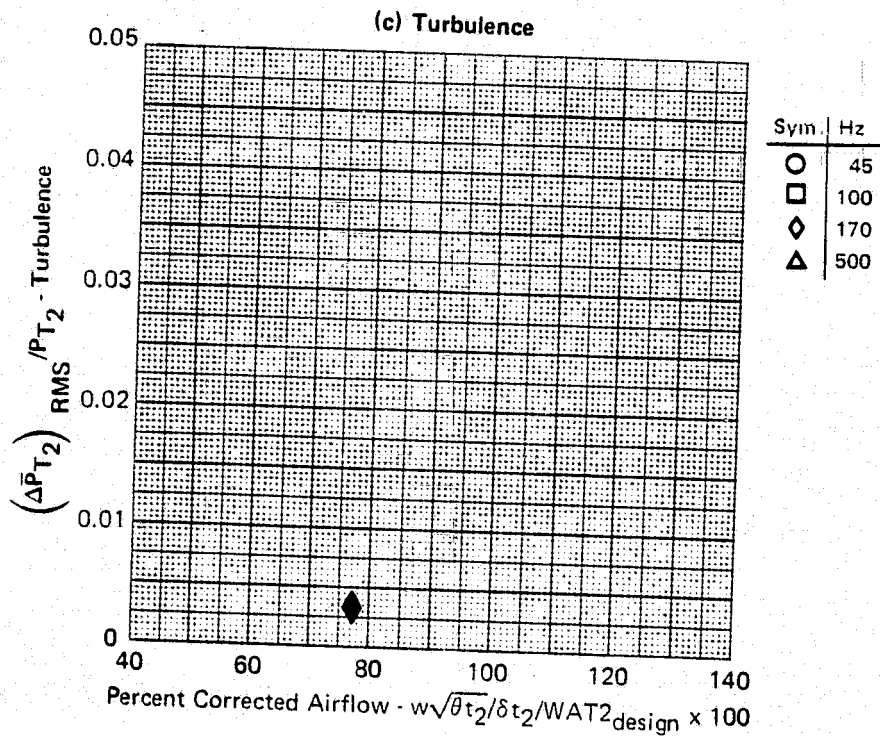


FIGURE G-31
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = 3.5, \beta = 0.2, WAT2 = 77.5\%$

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FLIGHT - NASA Data Study
 Part/Point - 421/6, Ident 31
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00

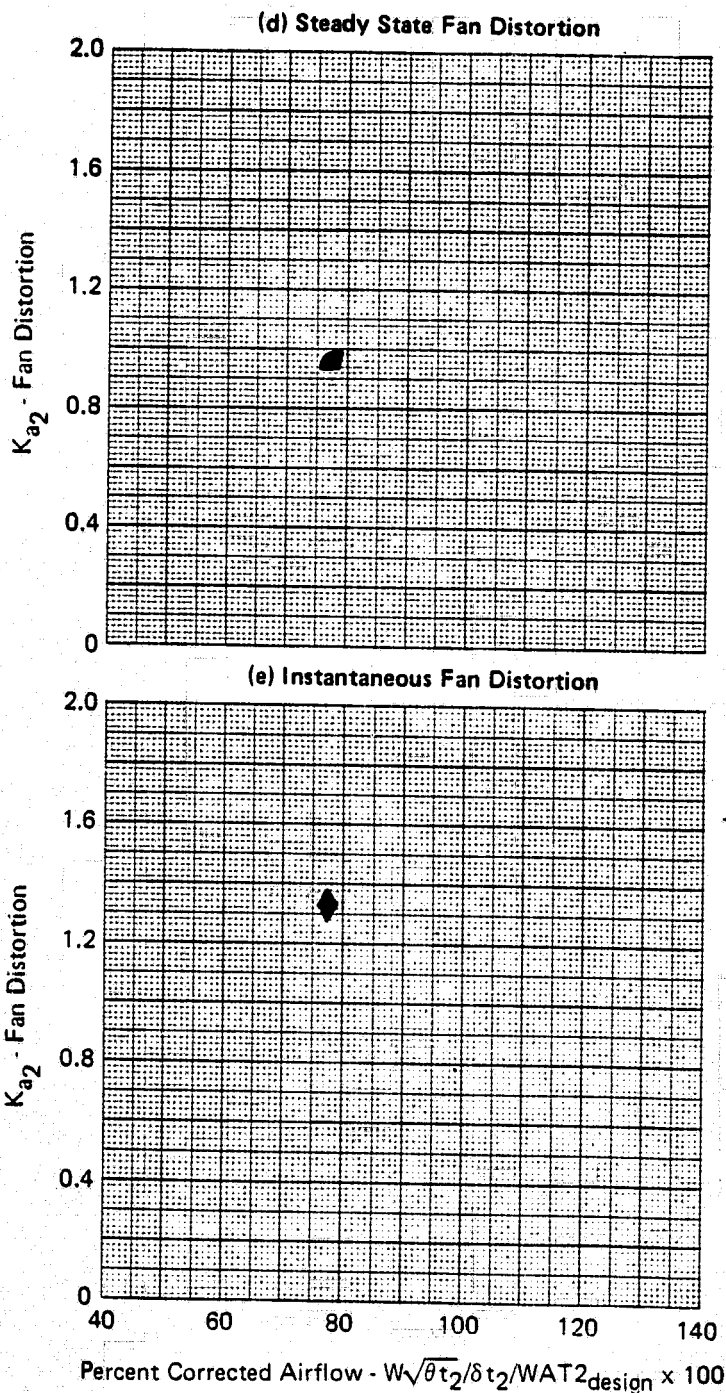


GP77-0658-5

FIGURE G-31 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = 3.5$, $\beta = 0.2$, $WAT2 = 77.5\%$

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FLIGHT - NASA Data Study
 Part/Point - 421/6, Ident 31
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00

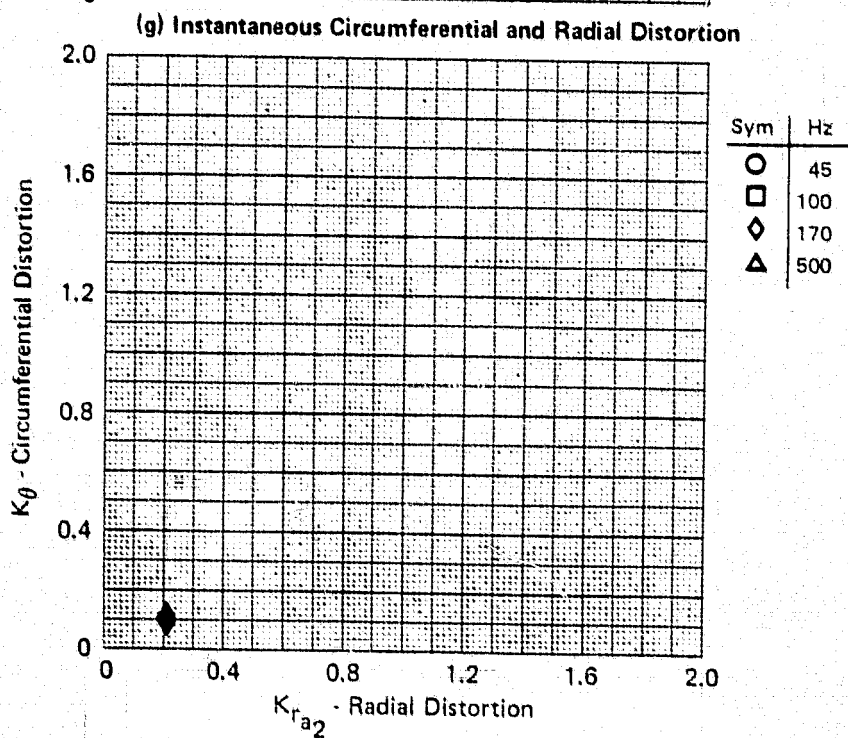
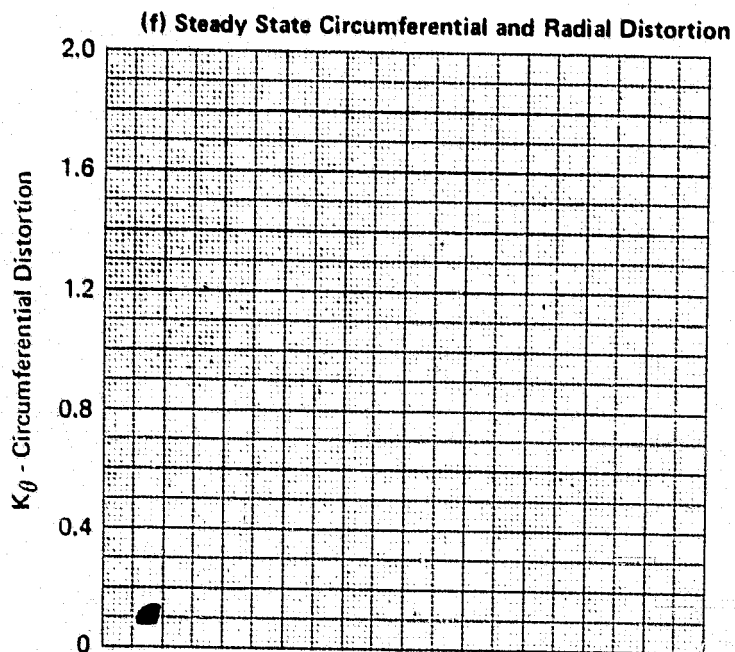


GP77-0658-3

FIGURE G-31 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90, \alpha = 3.5, \beta = 0.2, WAT2 = 77.5 \%$

FLIGHT - NASA Data Study
Part/Point - 421/6, Ident 31

RHO DELTA3 BYPASS CIVV
7.0 11.0 0.0 --25.00



GP77-0658-2

FIGURE G-31 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 3.5$, $\beta = 0.2$, WAT2 = 77.5 %

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FLIGHT - NASA Data Study
 Part/Point - 421/6, Ident 31
 RHO 7.0 DELTA3 11.0 BYPASS 0.0 CIVV -25.00

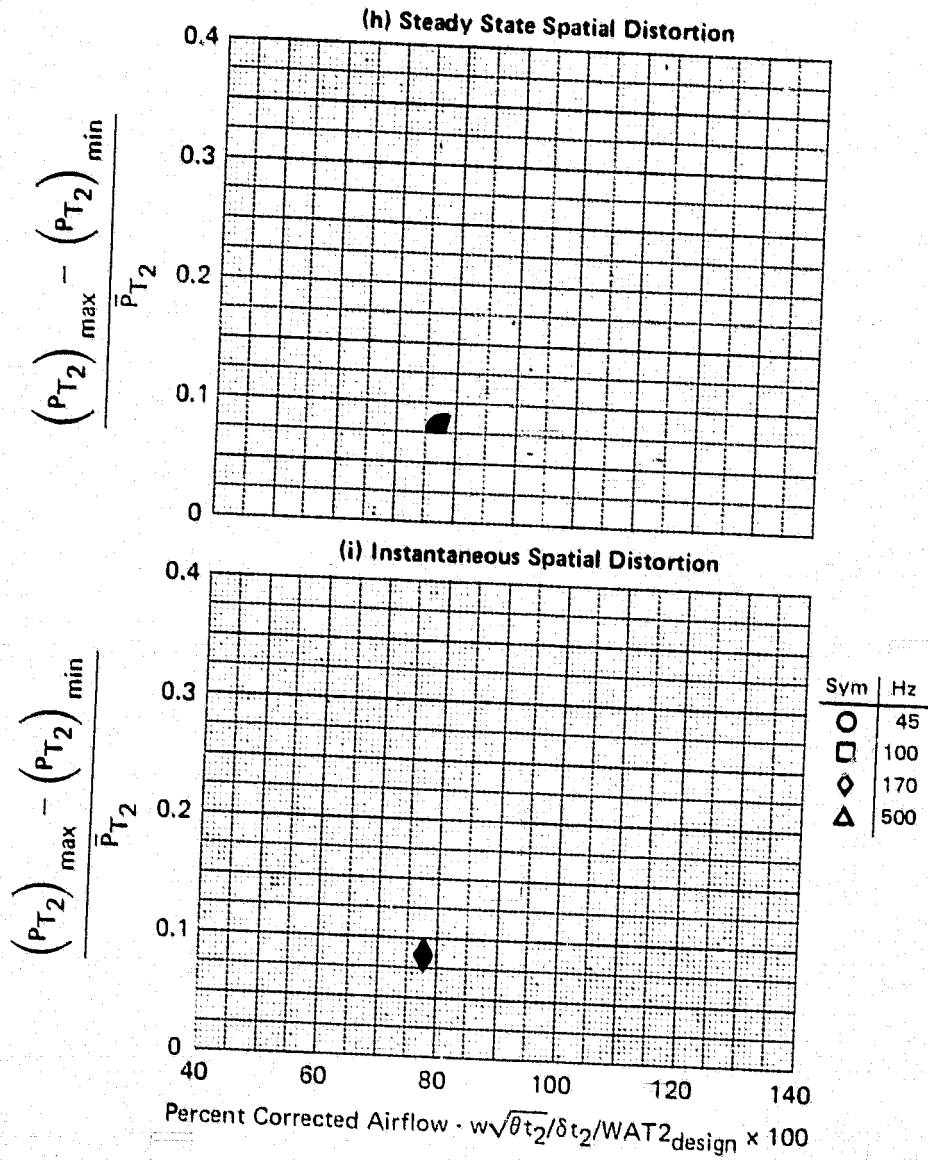


FIGURE G-31 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 3.5$, $\beta = 0.2$, $WAT2 = 77.5\%$

GP77-0658-4

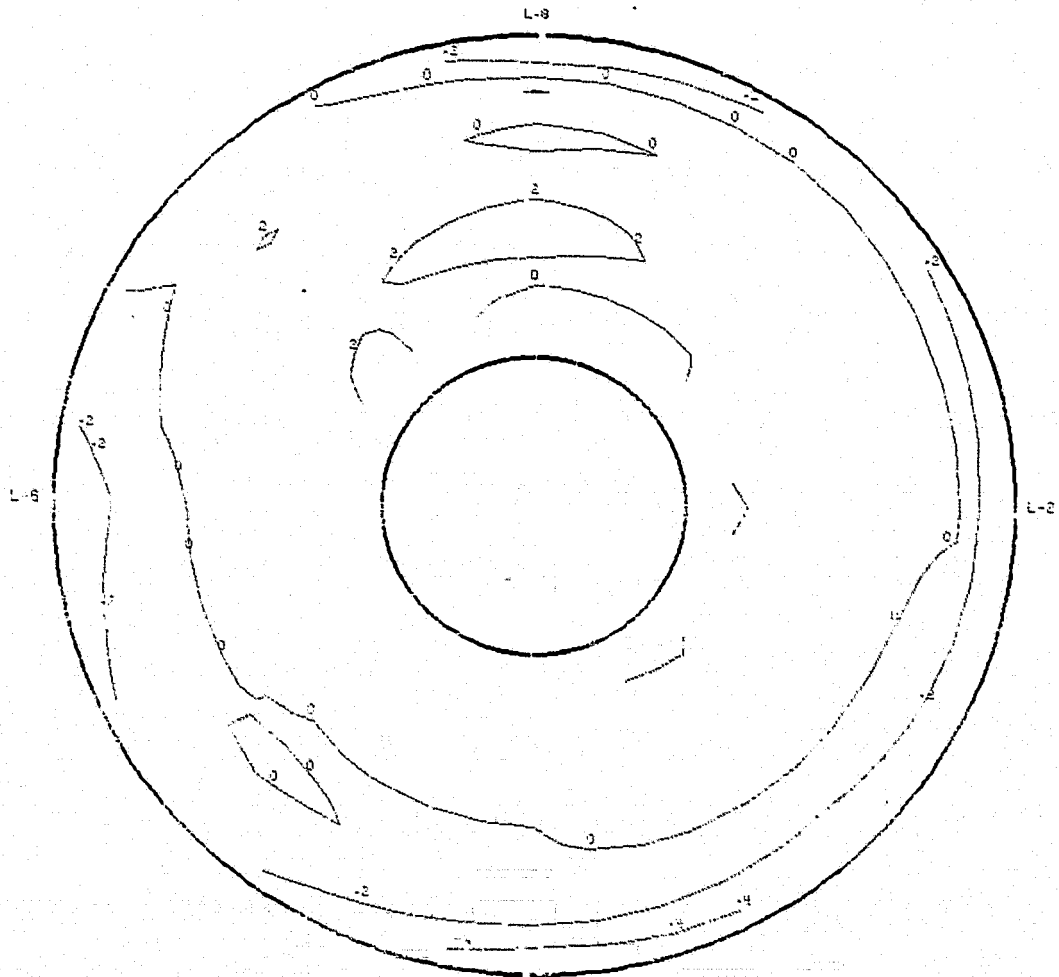
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/6 IDENT. 31
THE SEGMENT START TIME WAS AT 21:06:10.694

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	3.5	0.2	12253(40201)	7.0	11.0	0.0	77.5%	--25.00
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	K0SP	D2
31.26(4.534)	1.0	.1019	.1486	.8738	.9593	.0634	—	.0826

31 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 31.26 kPa (4.534 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

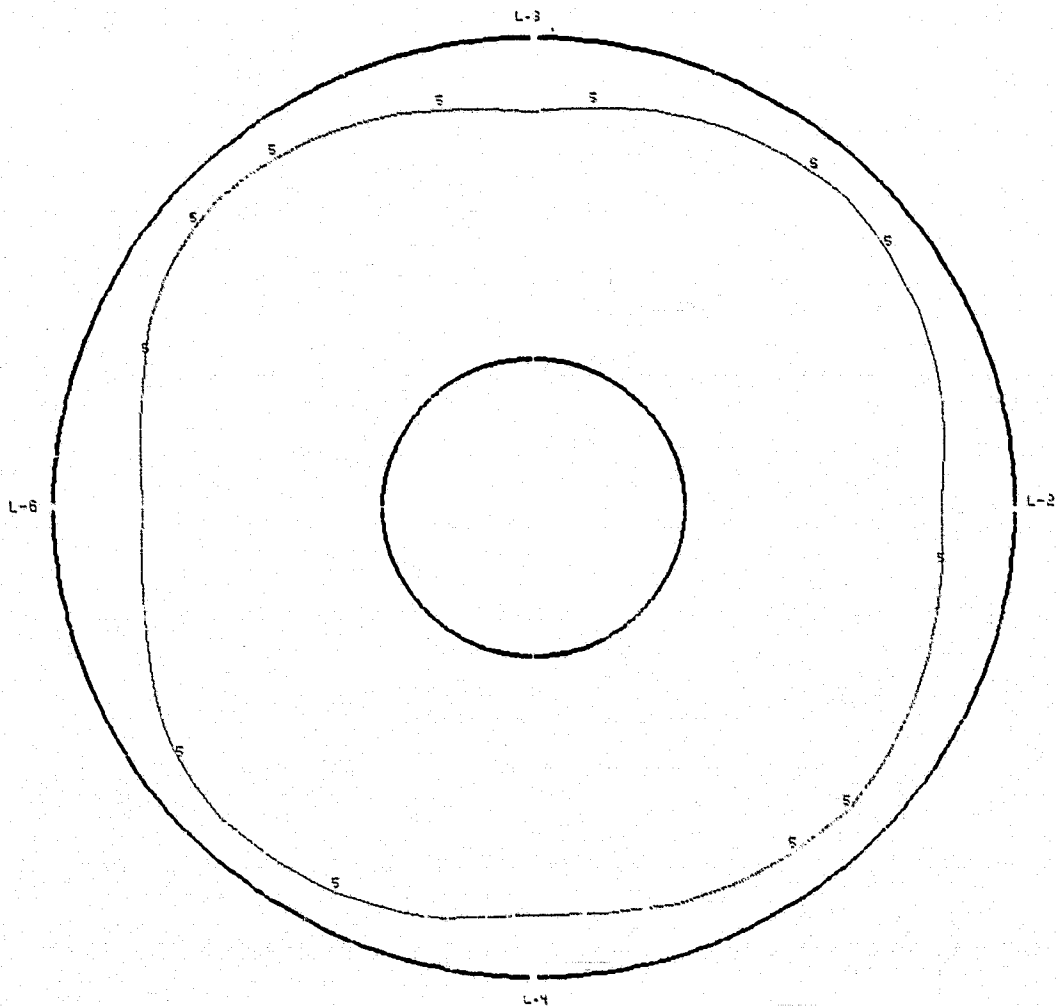
FIGURE G-31 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 3.5$, $\beta = 0.2$, WAT2 = 77.5 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/6 IDENT. 31
THE SEGMENT START TIME WAS AT 21:06:10.694

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	3.5	0.2	12253(40201)	7.0	11.0	0.0	77.5%	-25.00

31(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0034

FIGURE G-31 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 3.5$, $\beta = 0.2$, WAT2 = 77.5 %

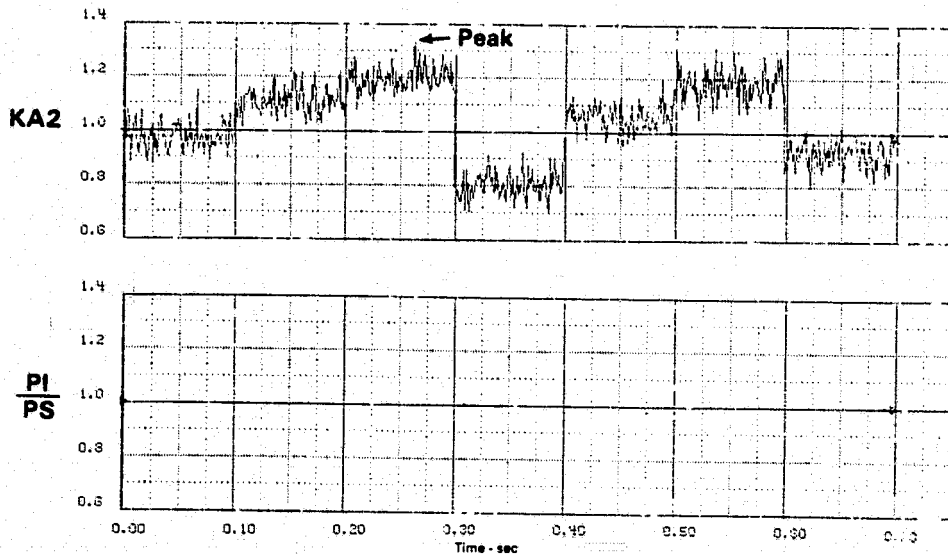
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/6 IDENT. 31
THE SEGMENT START TIME WAS AT 21:06:10.694

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	3.5	0.2	12254(40204)	7.0	11.0	0.0	77.5%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	O2
31.16(4.52)	.9969	.1056	.2082	1.2242	1.3297	.1280	.0849	.0864

31(I) Time History Plots
170 Hz



PEAK AT TIME = 0.26222 SECONDS

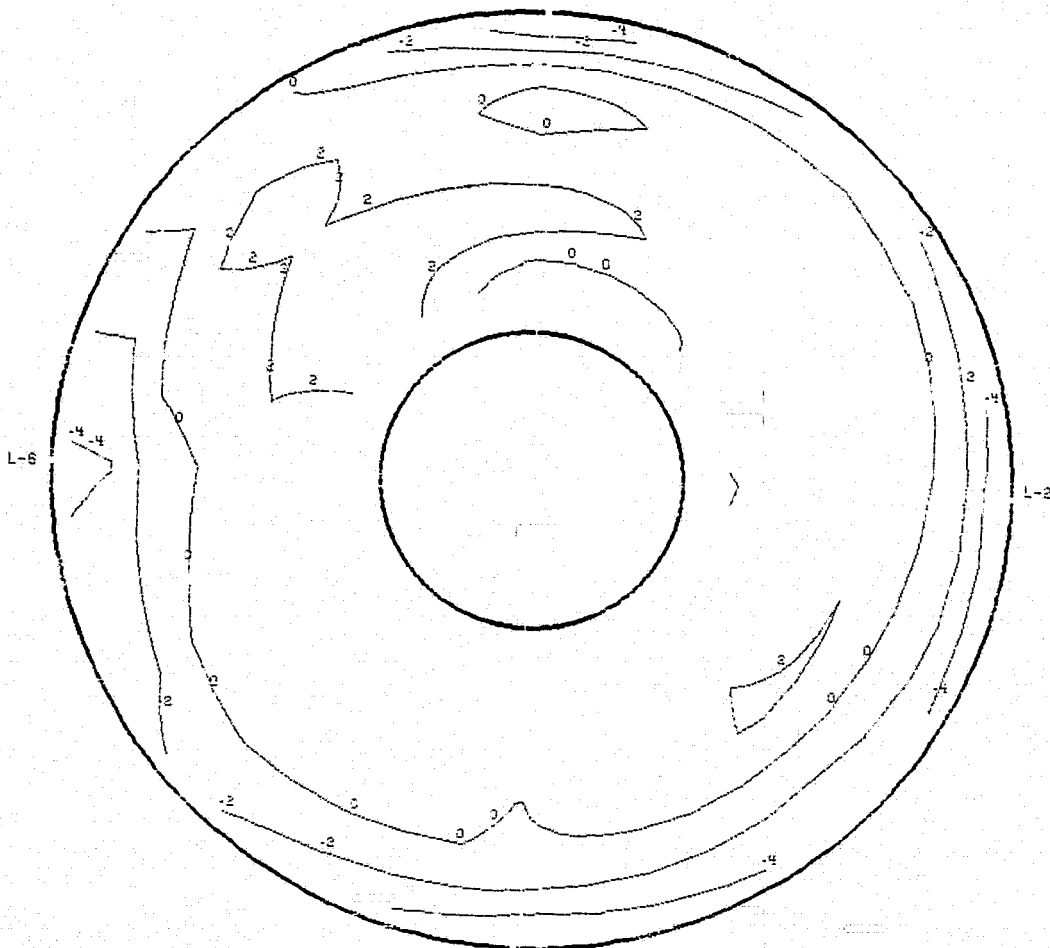
FIGURE G-31 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 3.5$, $\beta = 0.2$, WAT2 = 77.5 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/6 IDENT. 31
THE SEGMENT START TIME WAS AT 21:06:10.694

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	3.5	0.2	12254(40204)	7.0	11.0	0.0	77.5%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
31.16(4.52)	.9969	.1056	.2082	1.2242	1.3297	.1280	.0849	.0864

31(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 31.16 kPa (4.520 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.26222 SECONDS

FIGURE G-31 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 3.5$, $\beta = 0.2$, $WAT2 = 77.5\%$

FLIGHT - NASA Data Study
 Part/Point - 421/7, Ident 32
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -9.982

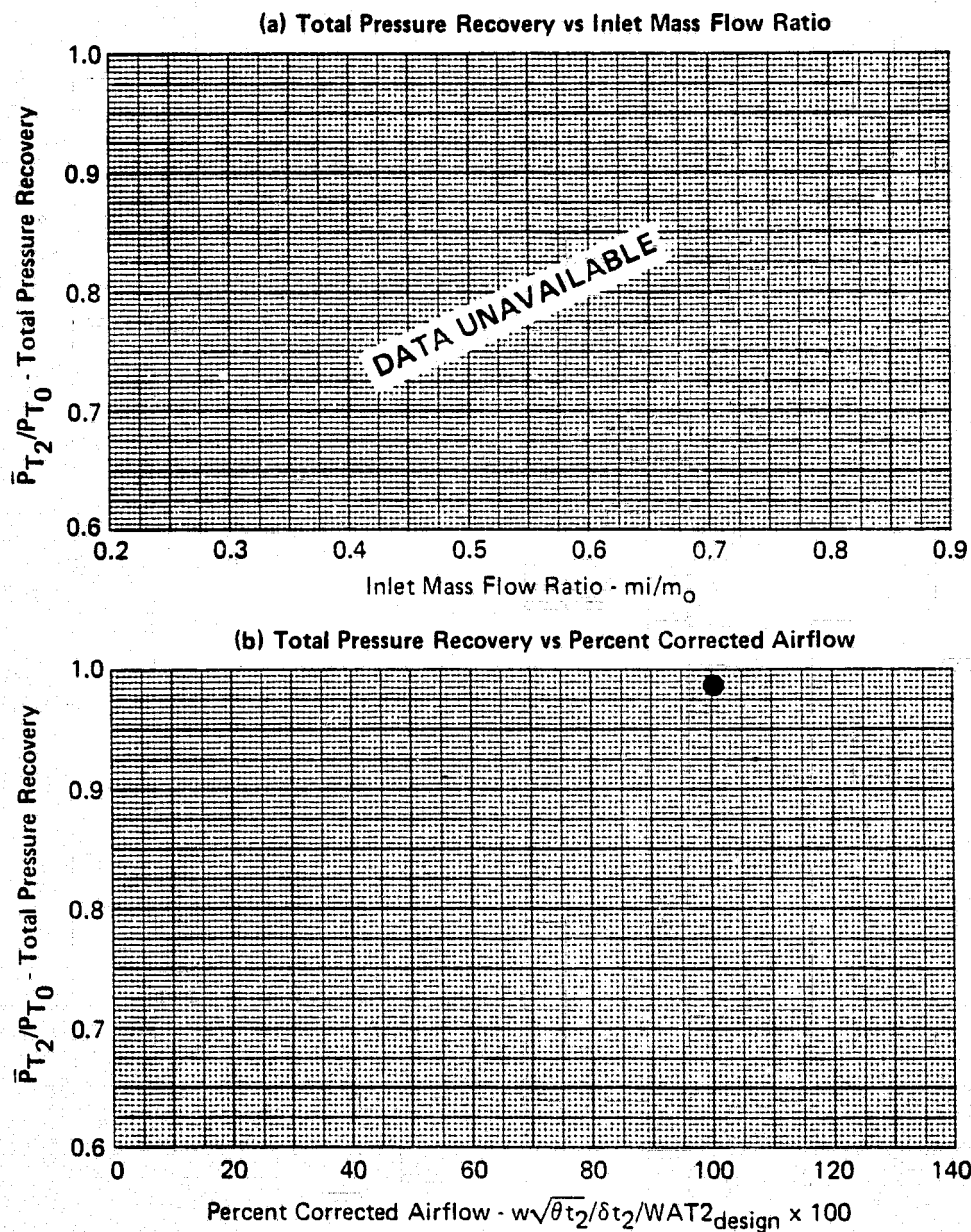
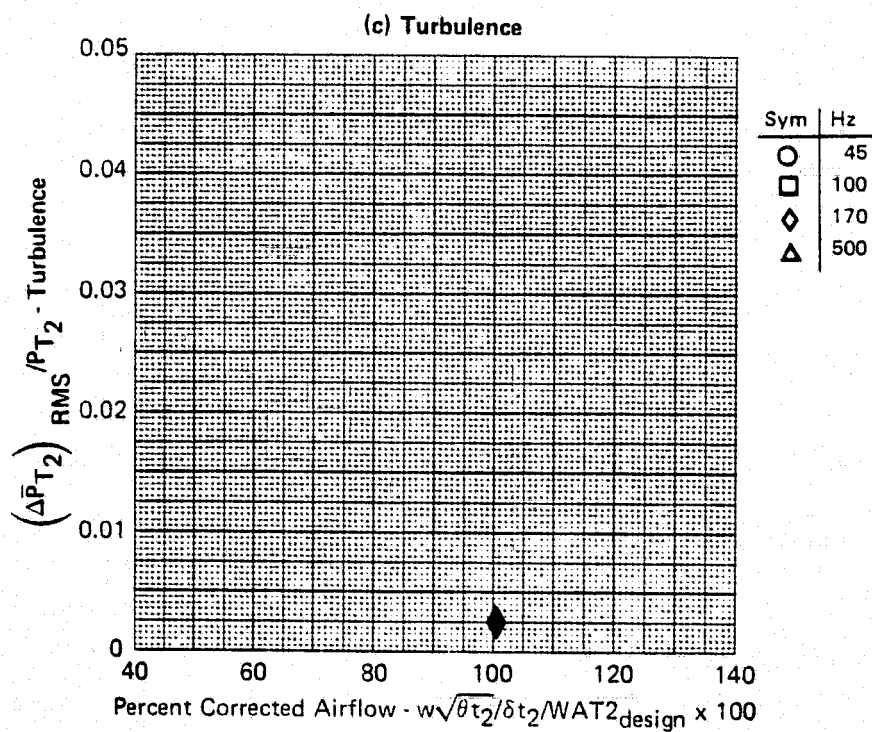


FIGURE G-32
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.90$, $\alpha = 5.2$, $\beta = -1$, $WAT2 = 100.1\%$

GP77-0658-1

FLIGHT - NASA Data Study
 Part/Point - 421/7, Ident 32
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -9.982

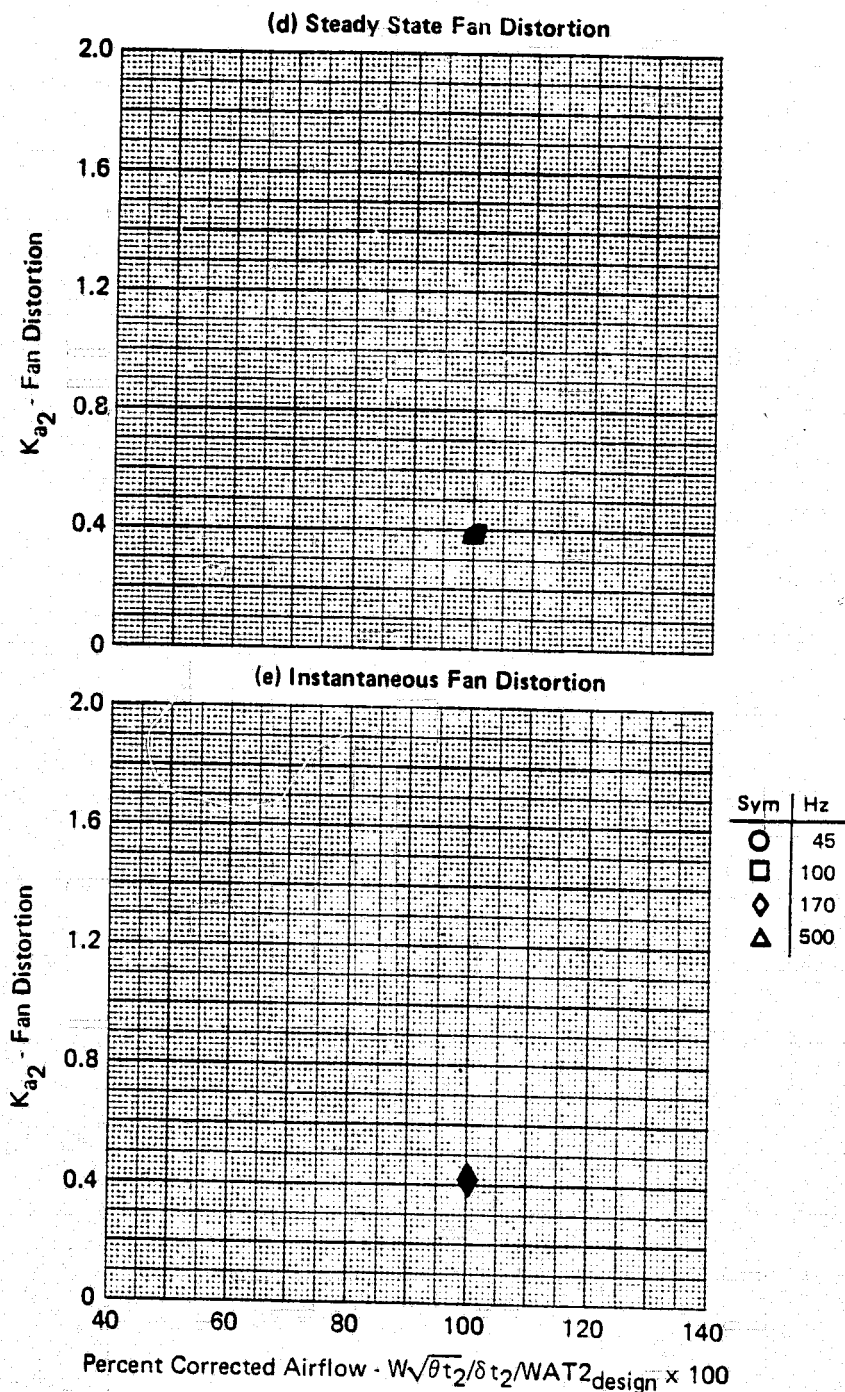


GP77-0658-5

FIGURE G-32 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = 5.2, \beta = -1, WAT2 = 100.1 \%$

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FLIGHT - NASA Data Study
 Part/Point - 421/7, Ident 32
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -9.982



GP77-0658-3

FIGURE G-32 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90, \alpha = 5.2, \beta = -0.1, WAT2 = 100.1\%$

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FLIGHT - NASA Data Study
 Part/Point - 421/7, Ident 32
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -9.982

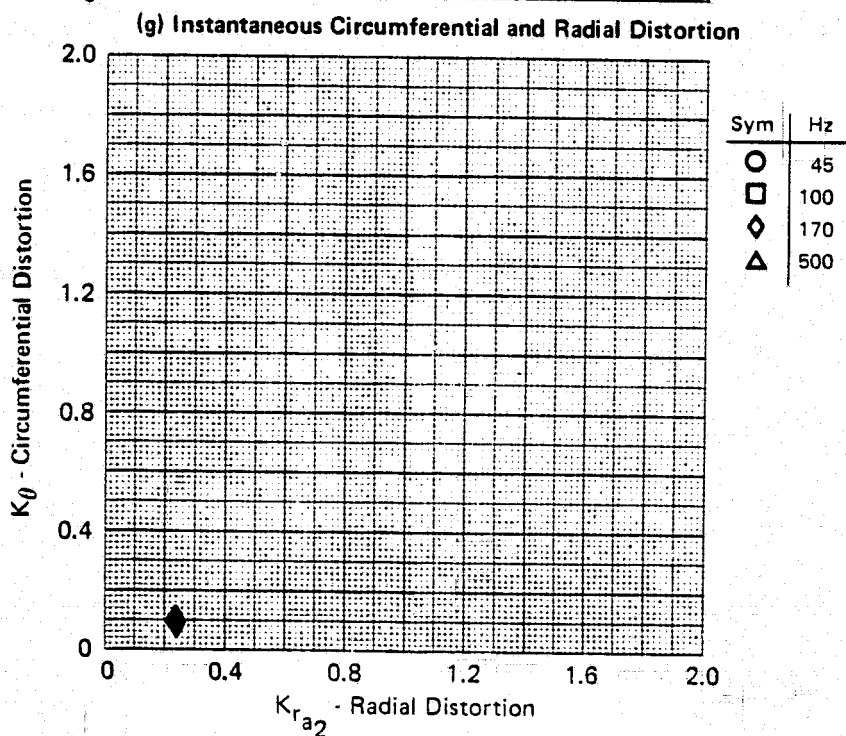
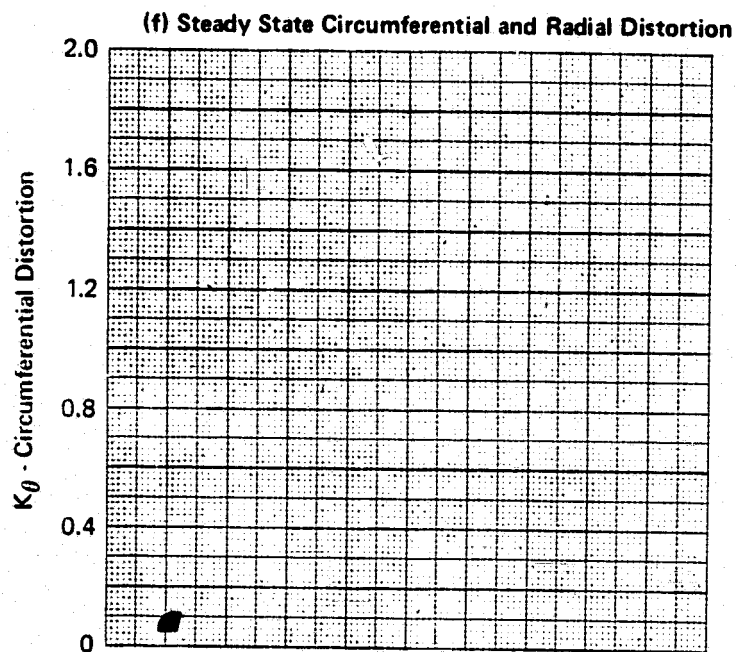


FIGURE G-32 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 5.2$, $\beta = -.1$, WAT2 = 100.1%

GP77-0658-2

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FLIGHT - NASA Data Study
 Part/Point - 421/7, Ident 32
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -9.982

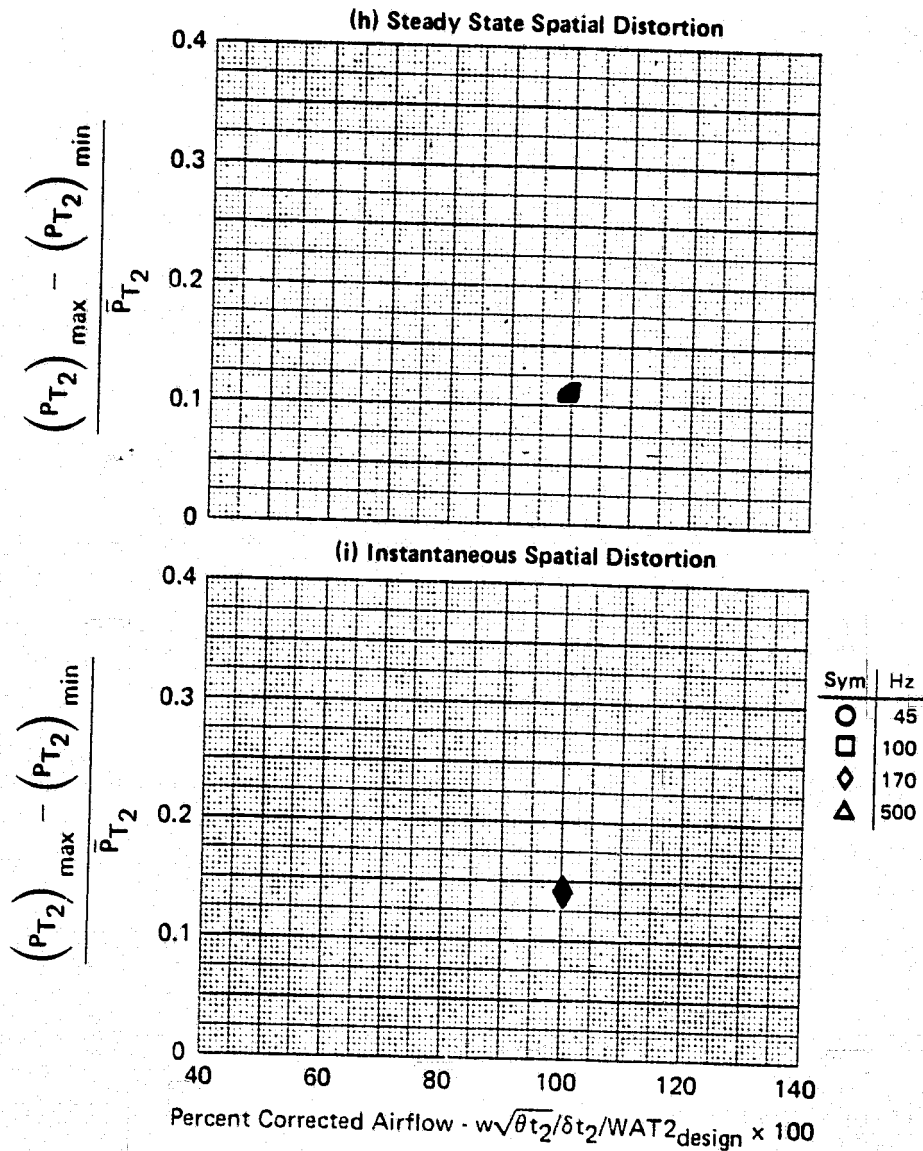


FIGURE G-32 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.90$, $\alpha = 5.2$, $\beta = -.1$, $WAT2 = 100.1\%$

GP77-0658-4

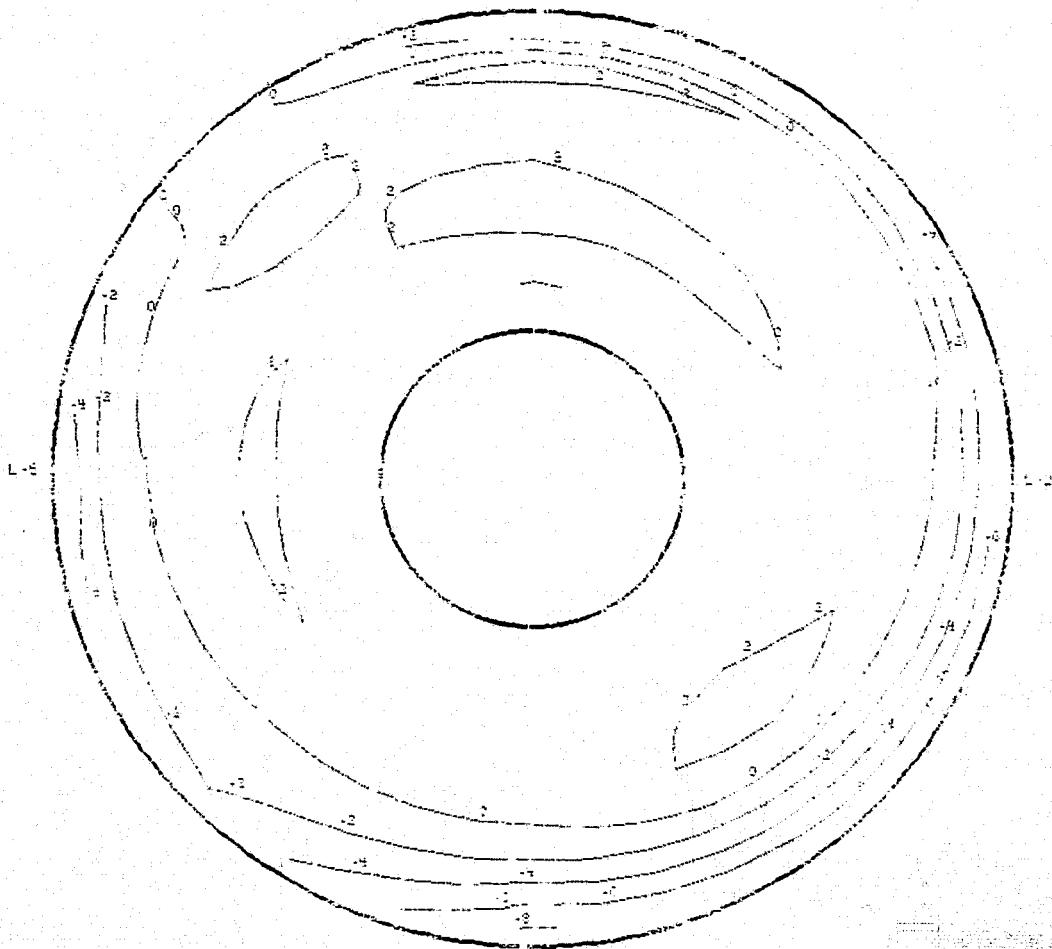
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/7 IDENT. 32
THE SEGMENT START TIME WAS AT 21:08:51.645

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	5.2	-0.1	12145(39846)	7.0	11.0	0.0	100.1%	-9.982
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	K0SP	D2
31.42(4.557)	1.0	.0754	.2238	.3039	.3795	.0281	—	.1115

32 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 31.42 kPa (4.557 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

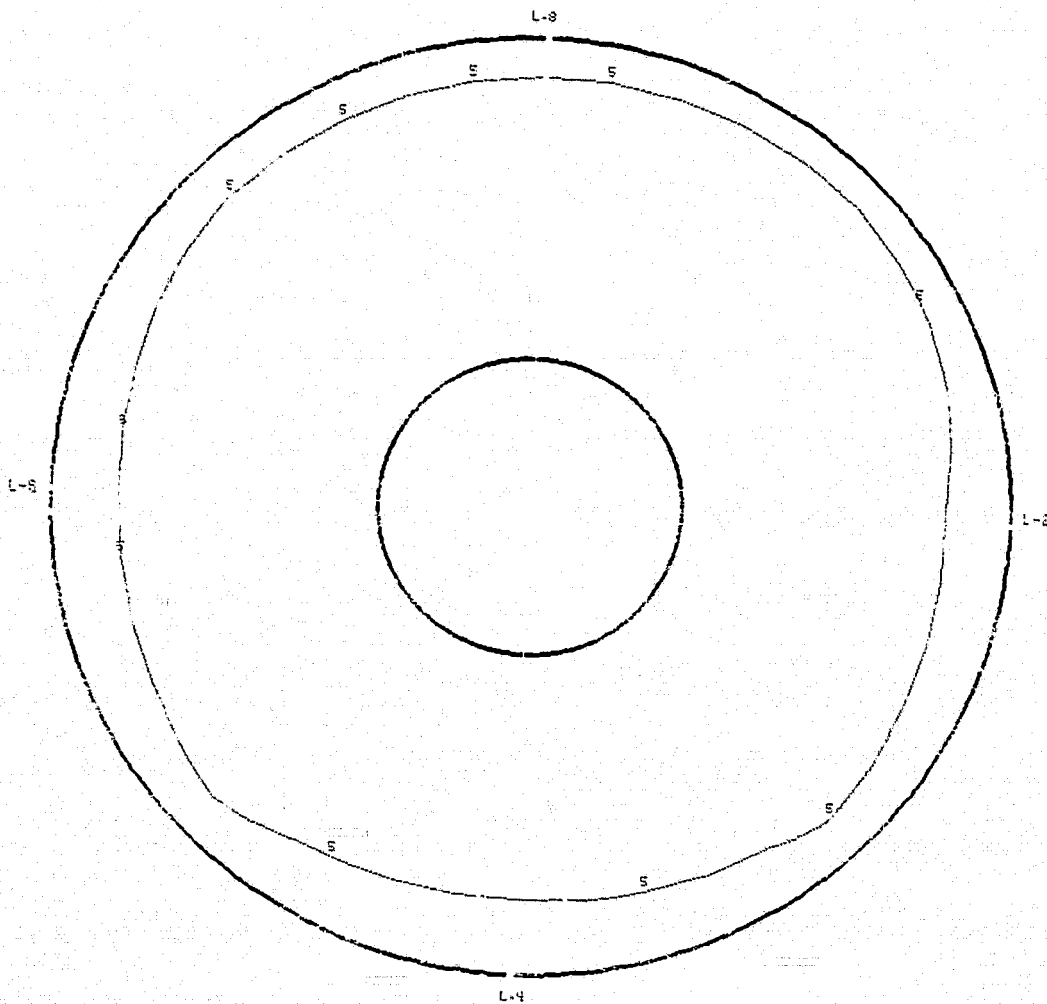
FIGURE G-32 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 5.2$, $\beta = -0.1$, WAT2 = 100.1 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/7 IDENT. 32
THE SEGMENT START TIME WAS AT 21:06:51.645

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	5.2	-0.1	12146(39846)	7.0	11.0	0.0	100.1%	-9.982

32(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0026

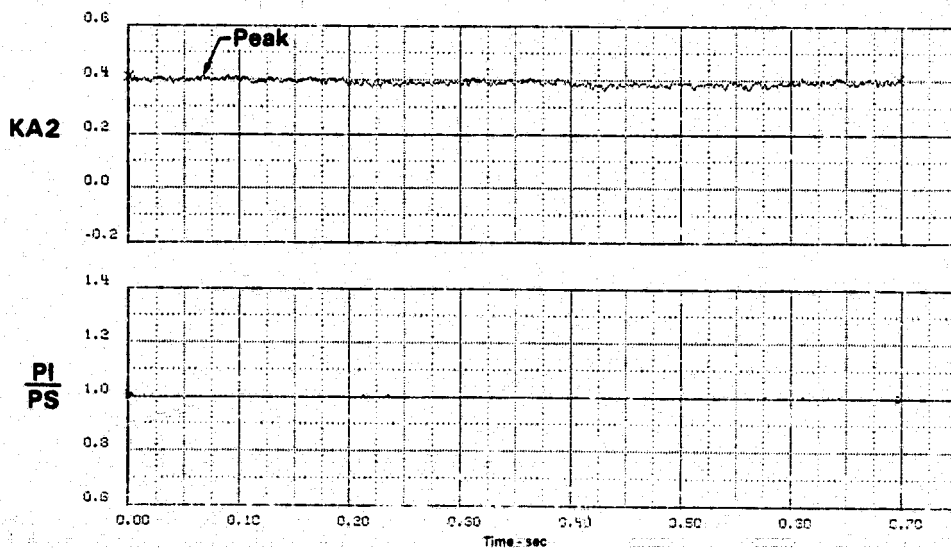
FIGURE G-32 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 5.2$, $\beta = -.1$, $WAT2 = 100.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/7 IDENT. 32
THE SEGMENT START TIME WAS AT 21:06:51.645

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	5.2	-0.1	12145(39847)	7.0	11.0	0.0	100.1%	-9.982
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
31.81(4.570)	1.003	.0974	.2332	.3167	.4140	.0528	.0492	.1418

32(I) Time History Plots 170 Hz



PEAK AT TIME = 0.06776 SECONDS

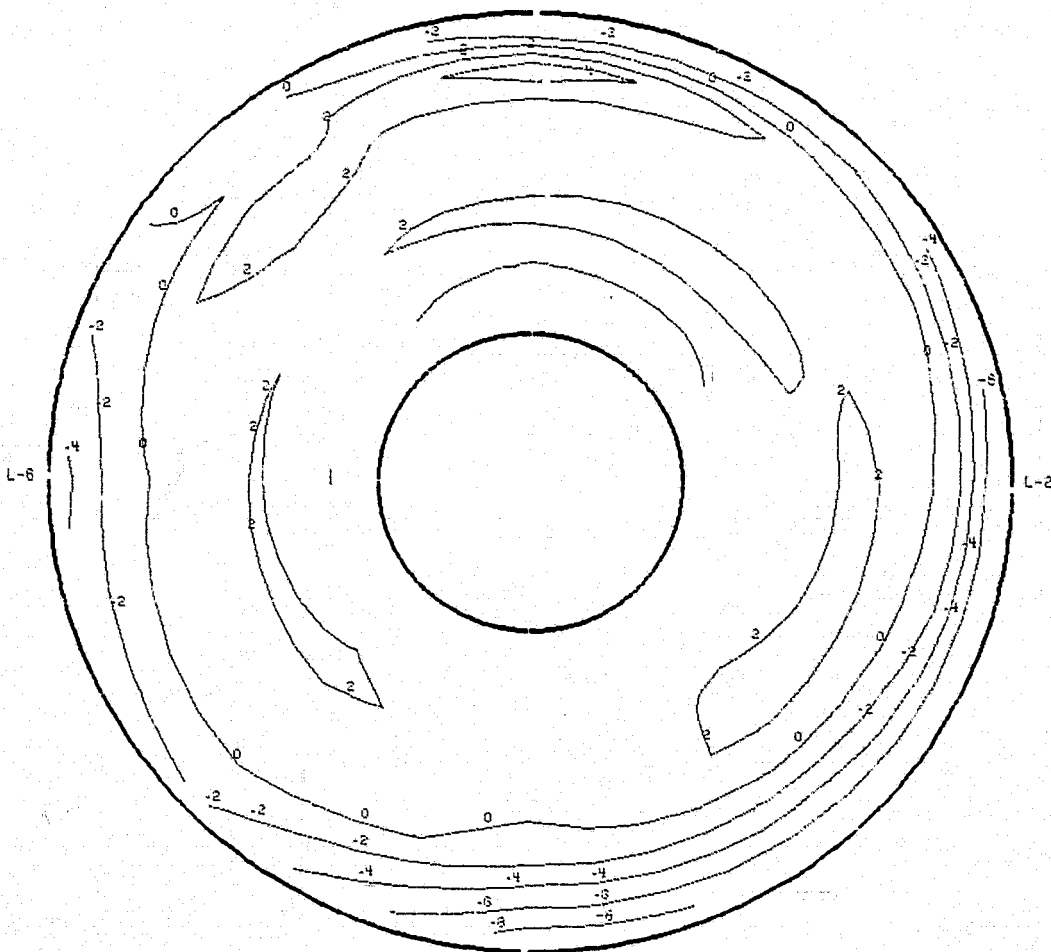
FIGURE G-32 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 5.2$, $\beta = -.1$, $WAT2 = 100.1\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/7 IDENT.32
THE SEGMENT START TIME WAS AT 21:08:51.645

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.90	5.2	-0.1	12145(39847)	7.0	11.0	0.0	100.1%	-9.982
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
31.51(4.570)	1.003	.0974	.2332	3167	.4140	.0528	.0492	.1415

32(m) Instantaneous Total Pressure Contour at Peak Instantaneous Ka_2
170 Hz



MEAN FACE PRESSURE = 31.51 kPa (4.570 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.06776 SECONDS

FIGURE G-32 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .90$, $\alpha = 5.2$, $\beta = -.1$, $WAT2 = 100.1\%$

FLIGHT - NASA Data Study
 Part/Point - 421/8, Ident 33
 RHO DELTA3 BYPASS CIVV
 7.0 11.1 0.0 -5.00

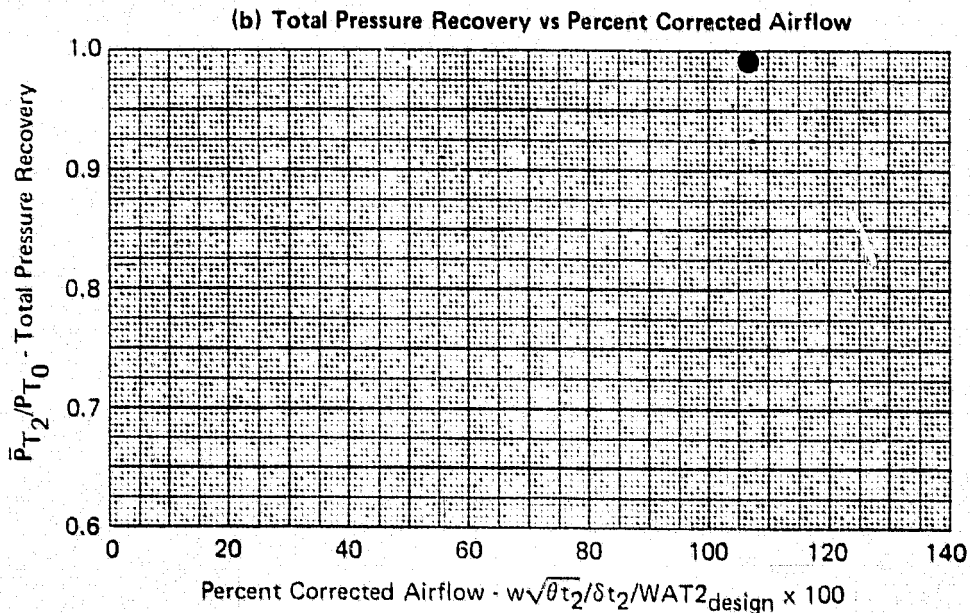
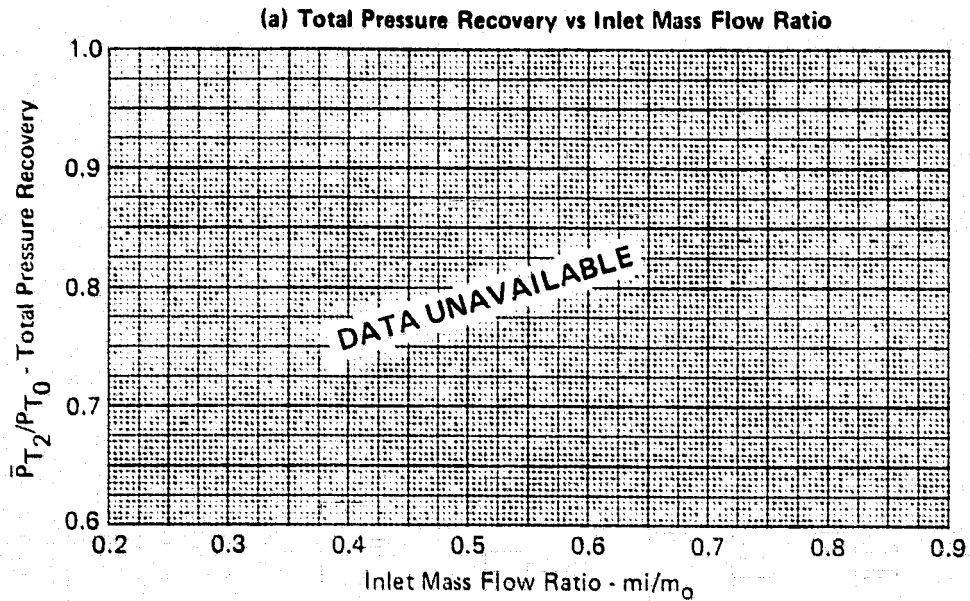
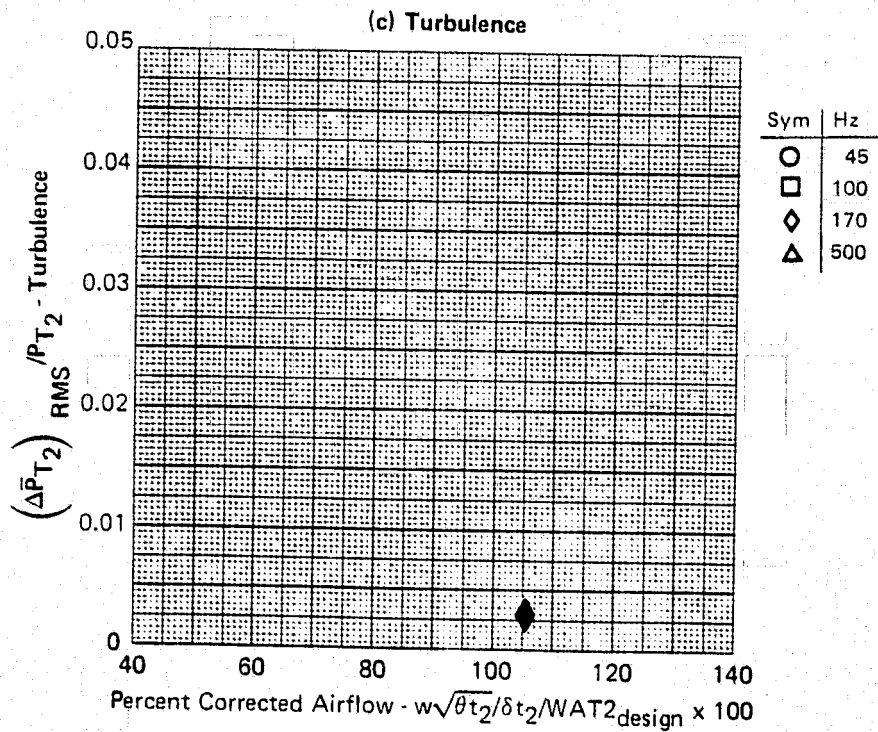


FIGURE G-33
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.94$, $\alpha = 4.3$, $\beta = 0.2$, $WAT2 = 105.6\%$

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FLIGHT - NASA Data Study
 Part/Point - 421/8, Ident 33
 RHO DELTA3 BYPASS CIVV
 7.0 11.1 0.0 -5.00

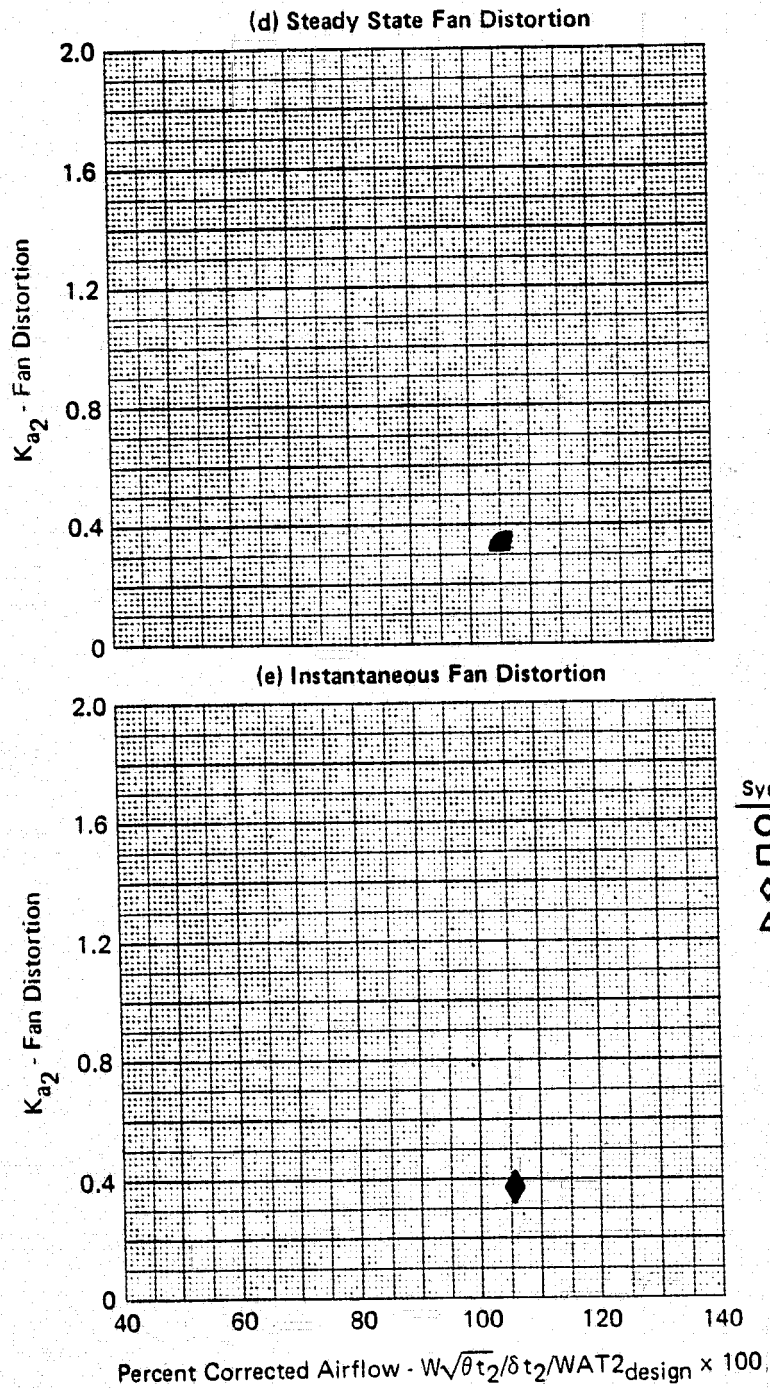


GP77-0658-5

FIGURE G-33 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 0.94$, $\alpha = 4.3$, $\beta = 0.2$, $WAT2 = 105.6\%$

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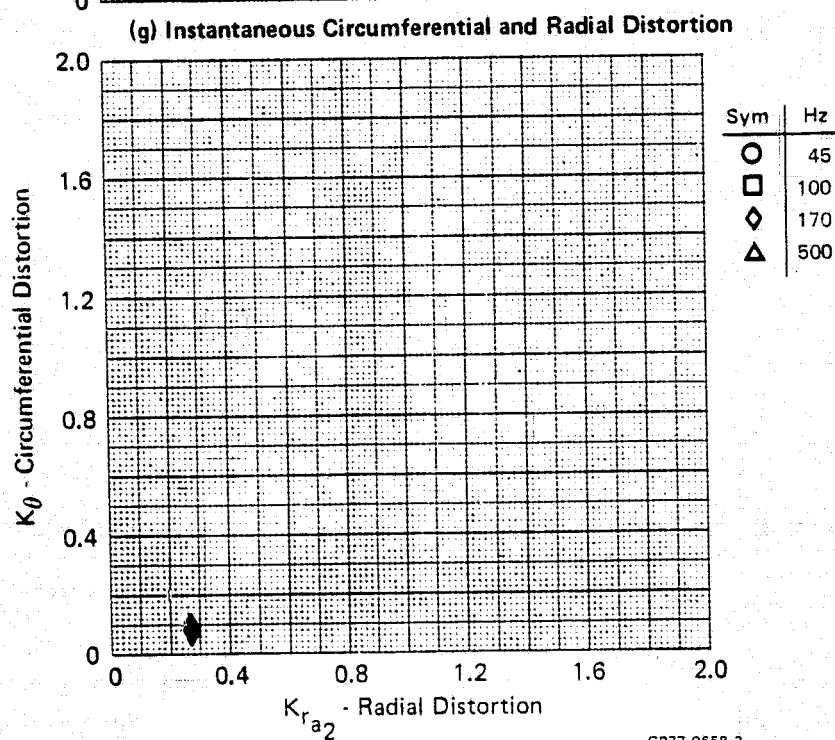
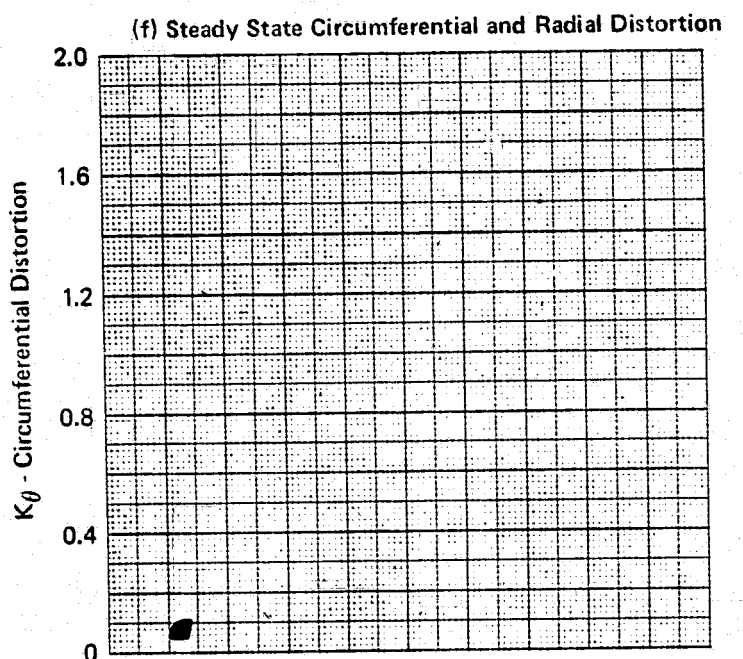
FLIGHT - NASA Data Study
 Part/Point - 421/8, Ident 33
 RHO DELTA3 BYPASS CIVV
 7.0 11.1 0.0 -5.00



GP77 0658-3

FIGURE G-33 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.94$, $\alpha = 4.3$, $\beta = 0.2$, $WAT2 = 105.6\%$

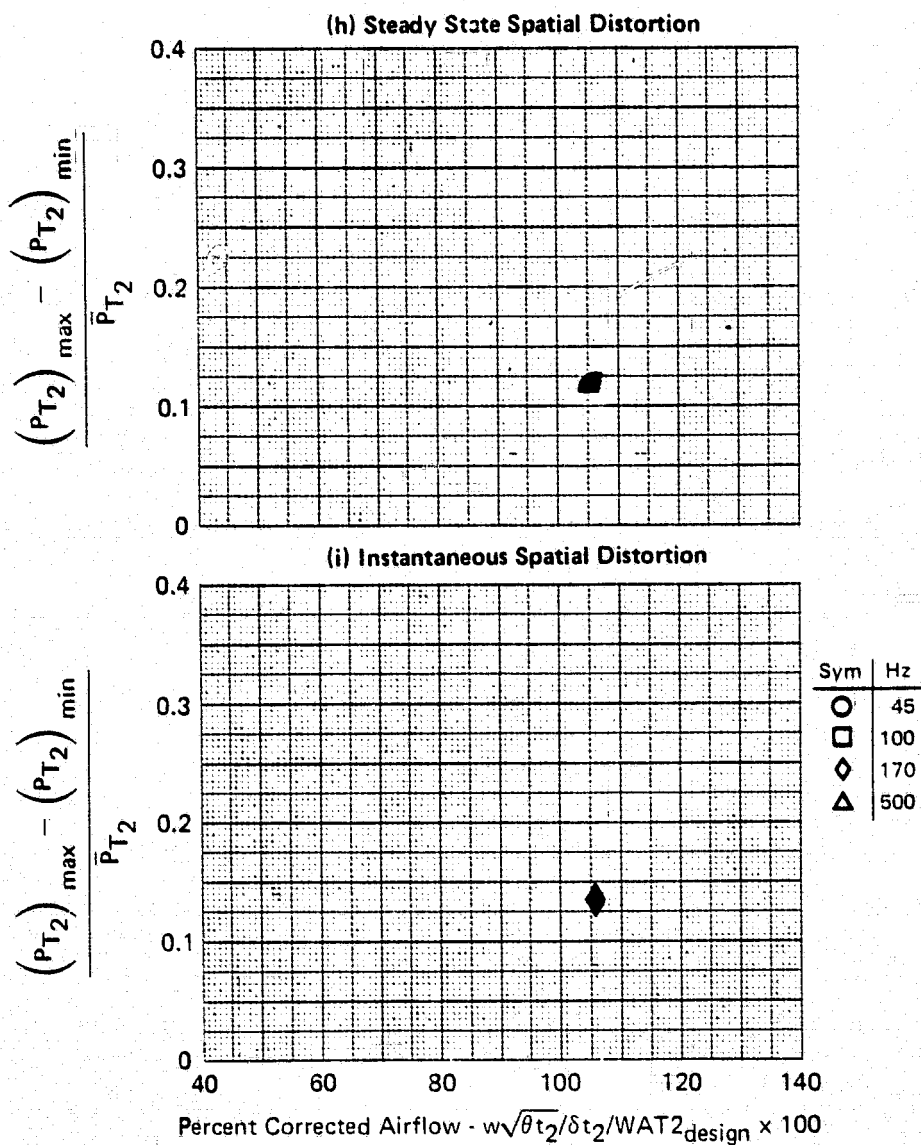
FLIGHT - NASA Data Study
 Part/Point - 421/8, Ident 33
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -5.00



GP77-0658 2

FIGURE G-33 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.94$, $\alpha = 4.3$, $\beta = 0.2$, $WAT2 = 105.6\%$

FLIGHT - NASA Data Study
 Part/Point - 421/8, Ident 33
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -5.00



GP77-0658-4

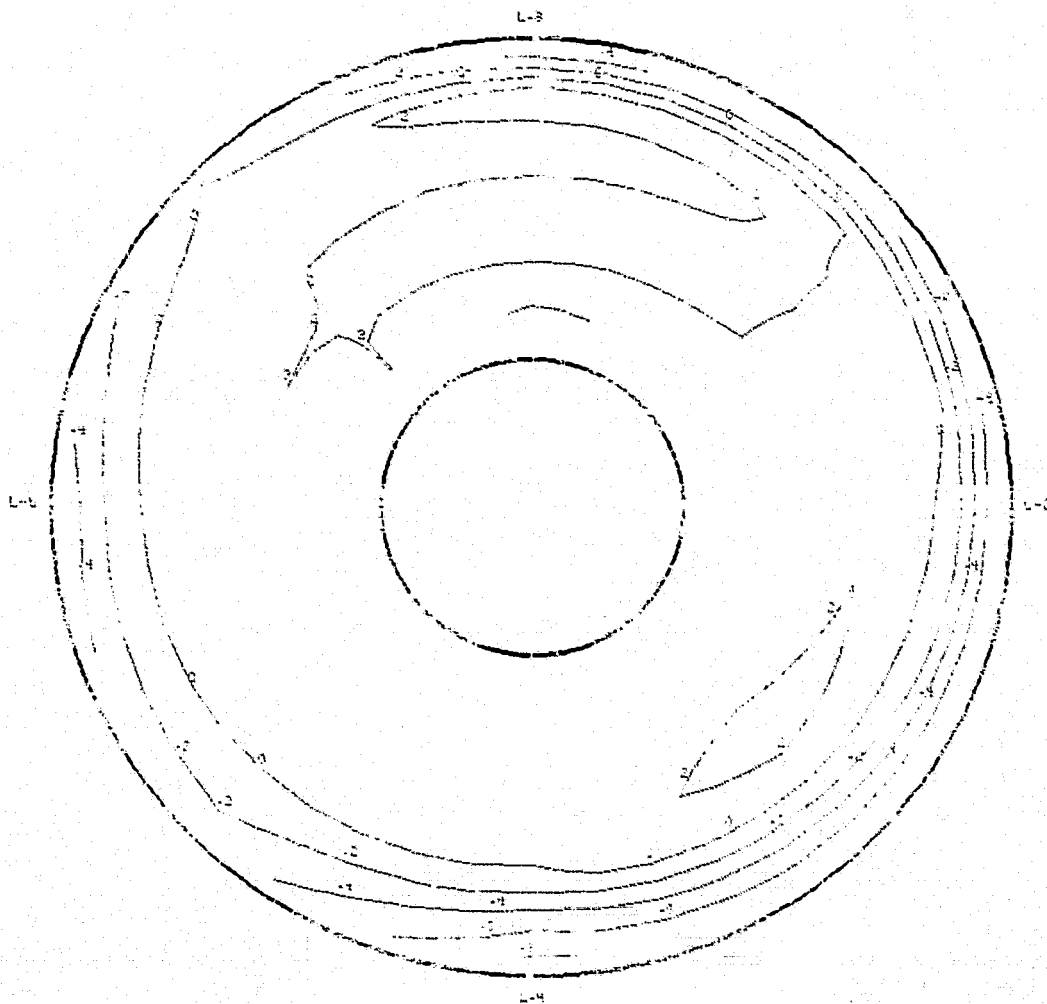
FIGURE G-33 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 0.94$, $\alpha = 4.3$, $\beta = 0.2$, $WAT2 = 105.6\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/8 IDENT.33
THE SEGMENT START TIME WAS AT 21:07:11.666

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.94	4.3	0.2	12086(39653)	7.0	11.0	0.0	105.6%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	O2
33.39(4.843)	1.0	.0682	.2512	.2607	.3294	.0205	—	.1167

33(j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 33.39 kPa (4.843 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-33 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .94$, $\alpha = 4.3$, $\beta = 0.2$, $WAT2 = 105.6\%$

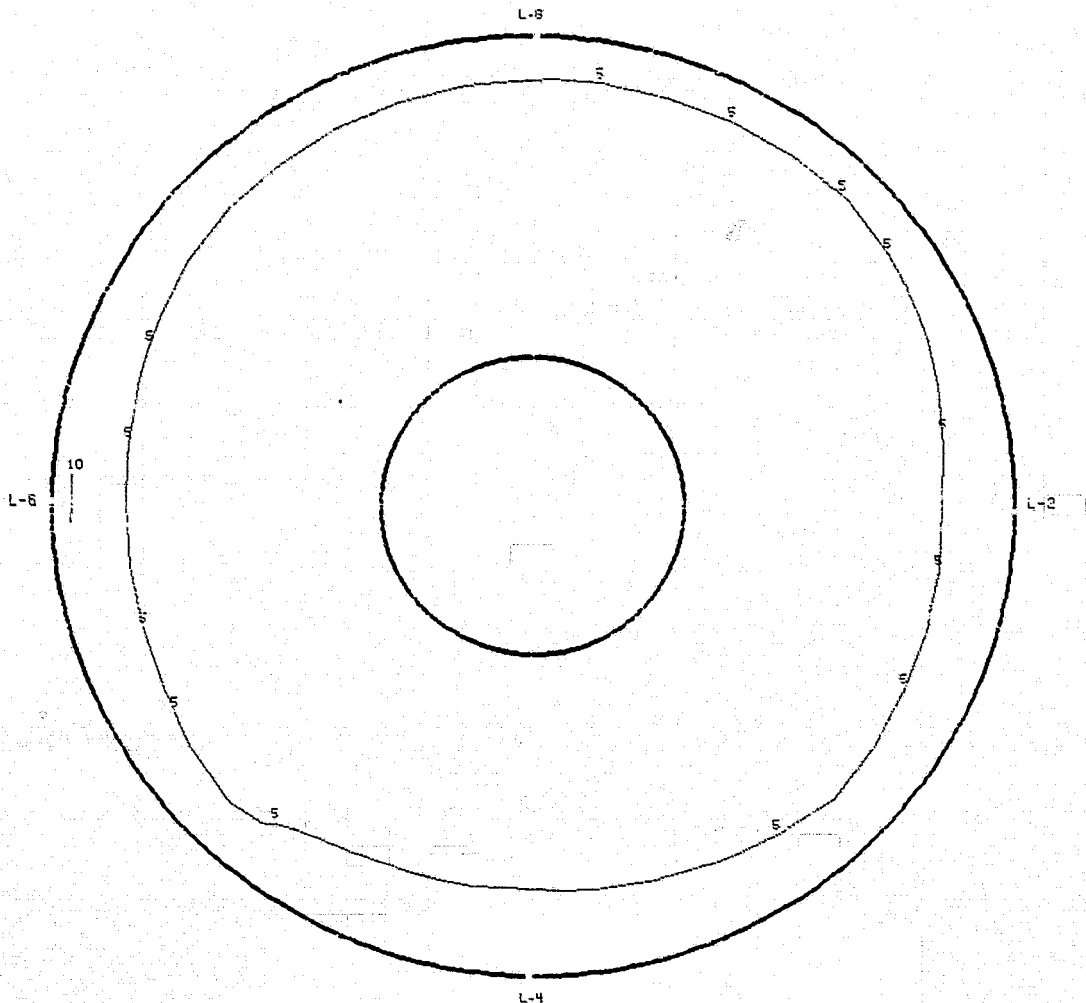
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/8 IDENT. 33
THE SEGMENT START TIME WAS AT 21:07:11.556

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.94	4.3	0.2	12086(39653)	7.0	11.0	0.0	105.6%	-5.000

33(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0030

FIGURE G-33 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .94$, $\alpha = 4.3$, $\beta = 0.2$, $WAT2 = 105.6\%$

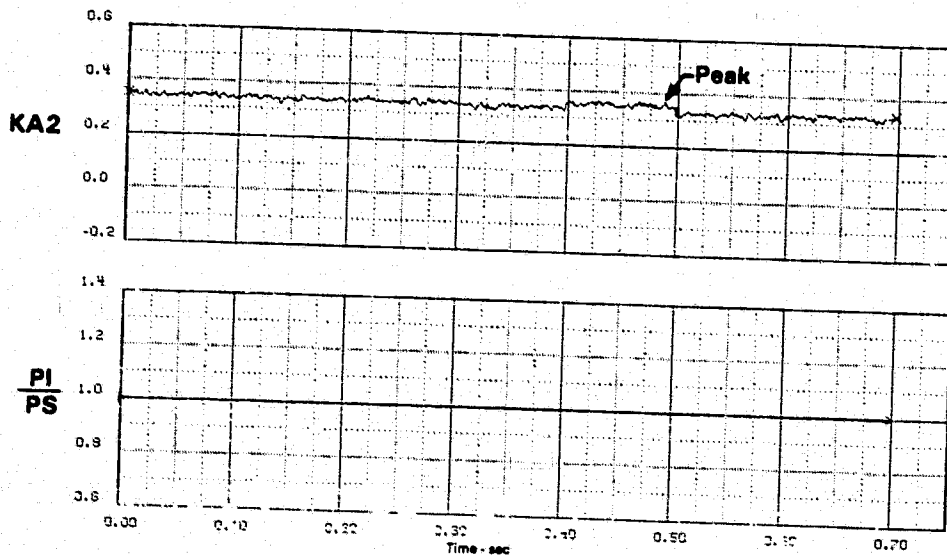
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/8 IDENT.33
THE SEGMENT START TIME WAS AT 21:07:11.666

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.94	4.3	0.2	12089(39662)	7.0	11.0	0.0	105.6%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
33.37(4.84)	.9894	.0902	.2679	.2781	.3683	0.0394	.0310	.1353

33(l) Time History Plots
170 Hz



PEAK AT TIME = 0.4880 SECONDS

FIGURE G-33 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = .94$, $\alpha = 4.3$, $\beta = 0.2$, $WAT2 = 105.6\%$

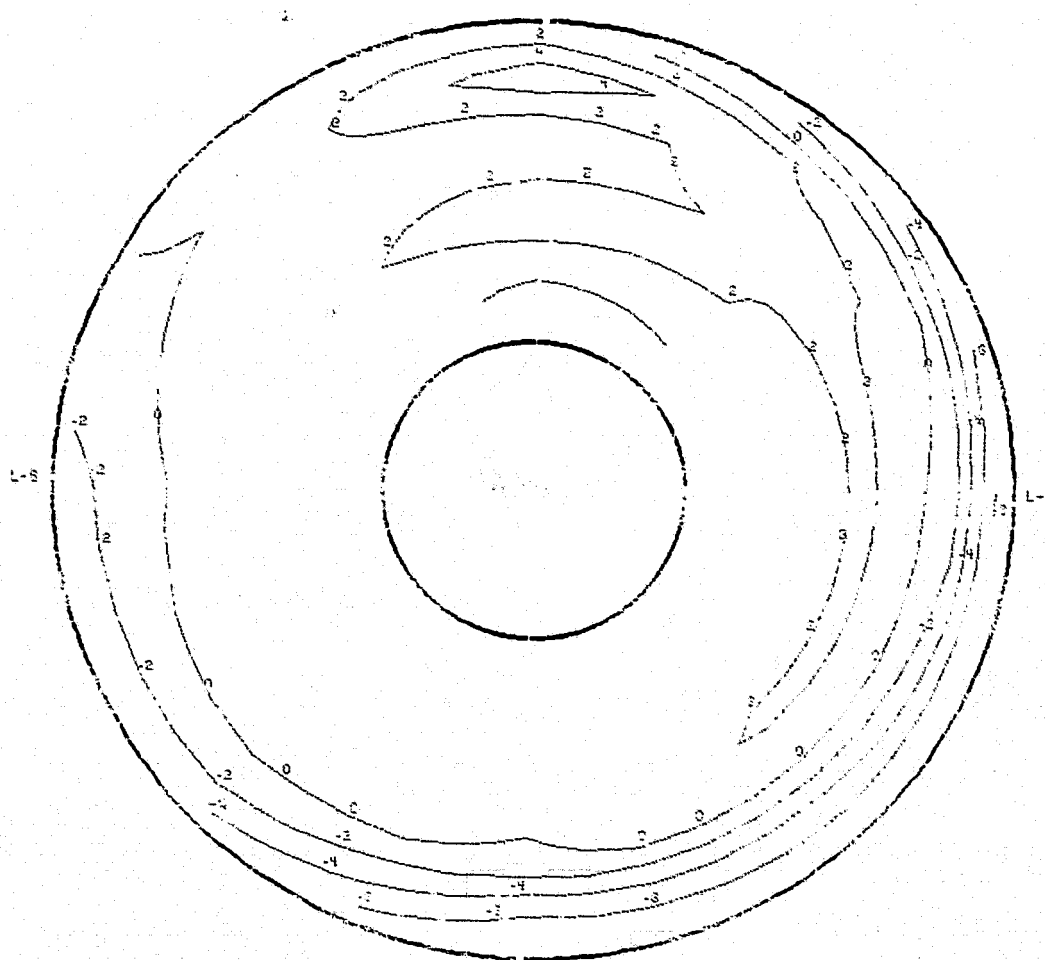
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/8 IDENT.33
THE SEGMENT START TIME WAS AT 21:07:11.666

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
.94	4.3	0.2	12089(39662)	7.0	11.0	0.0	105.6%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	O2
33.37(4.84)	.9994	.0902	.2679	.2781	.3683	0.0394	.0310	.1353

33(m)Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 33.37 kPa (4.840 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.4880 SECONDS

FIGURE G-33 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = .94$, $\alpha = 4.3$, $\beta = 0.2$, $WAT2 = 105.6\%$

FLIGHT - NASA Data Study
 Part/Point - 423/4, Ident 34
 RHO DELTA3 BYPASS CIVV
 6.0 27.6 0.0 -12.30

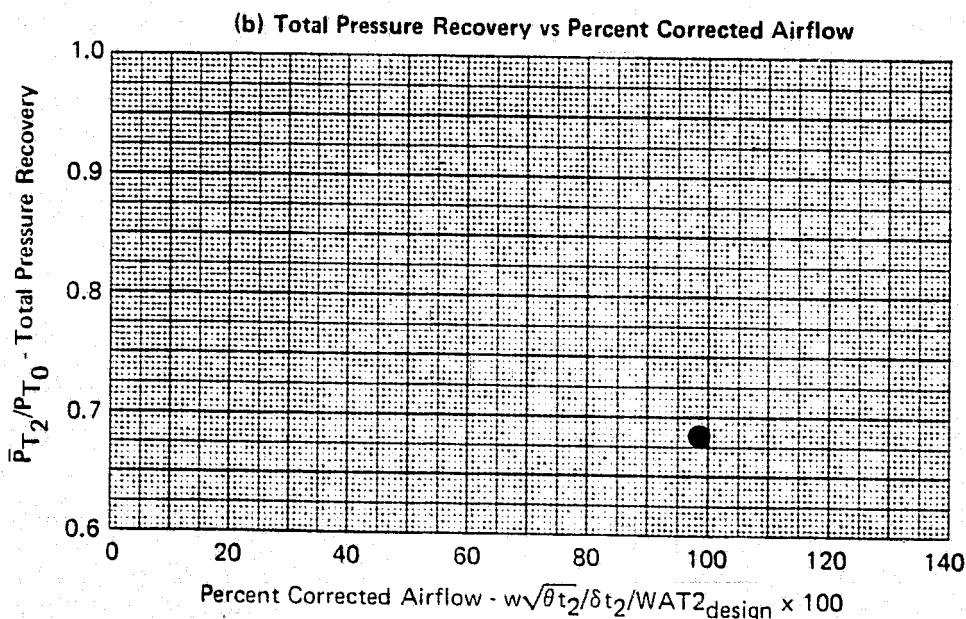
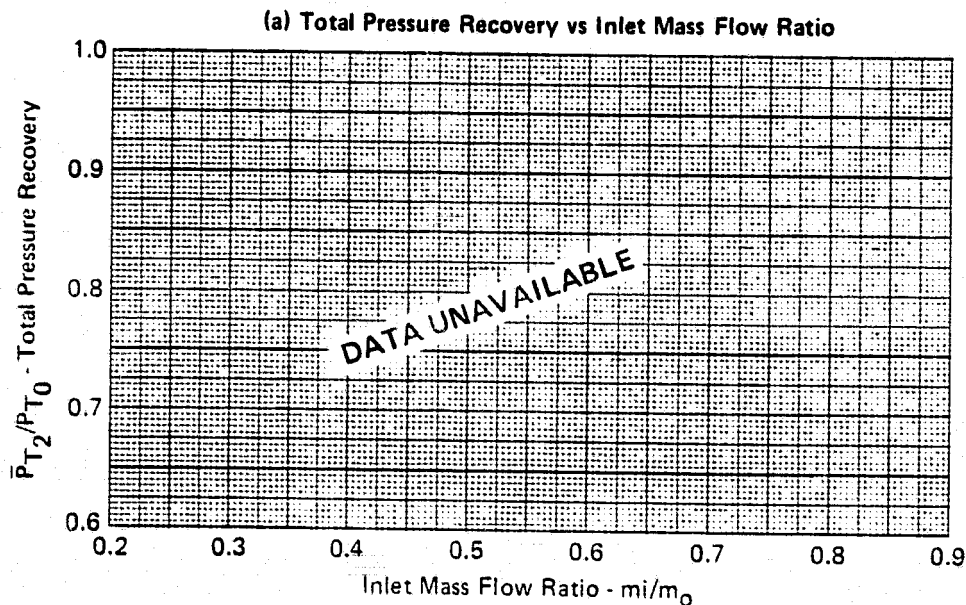
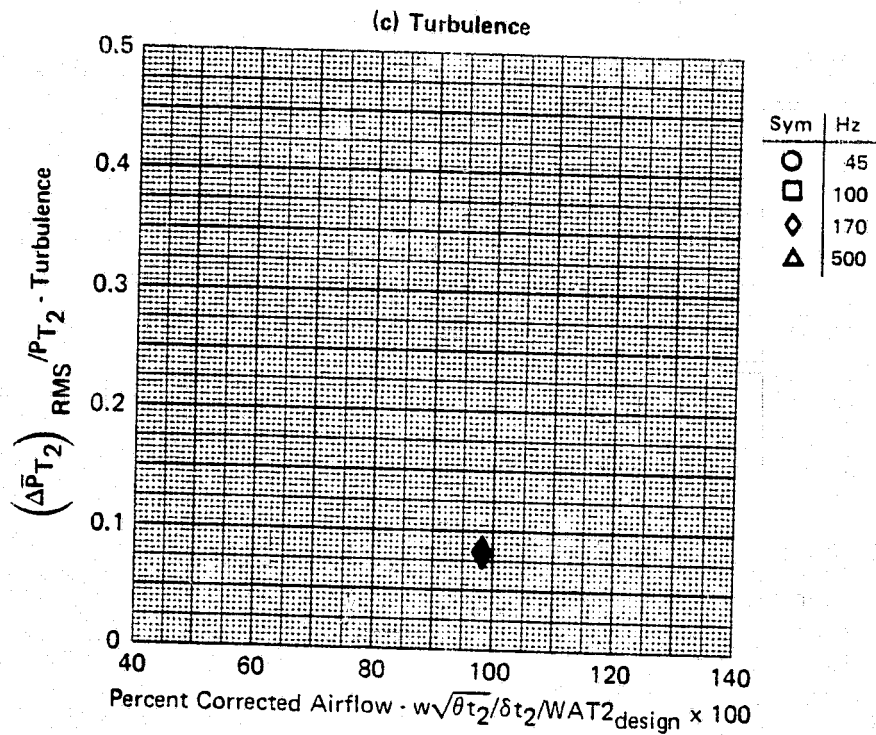


FIGURE G-34
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.21, \alpha = 1.5, \beta = 0.0, WAT2 = 98.3 \%$

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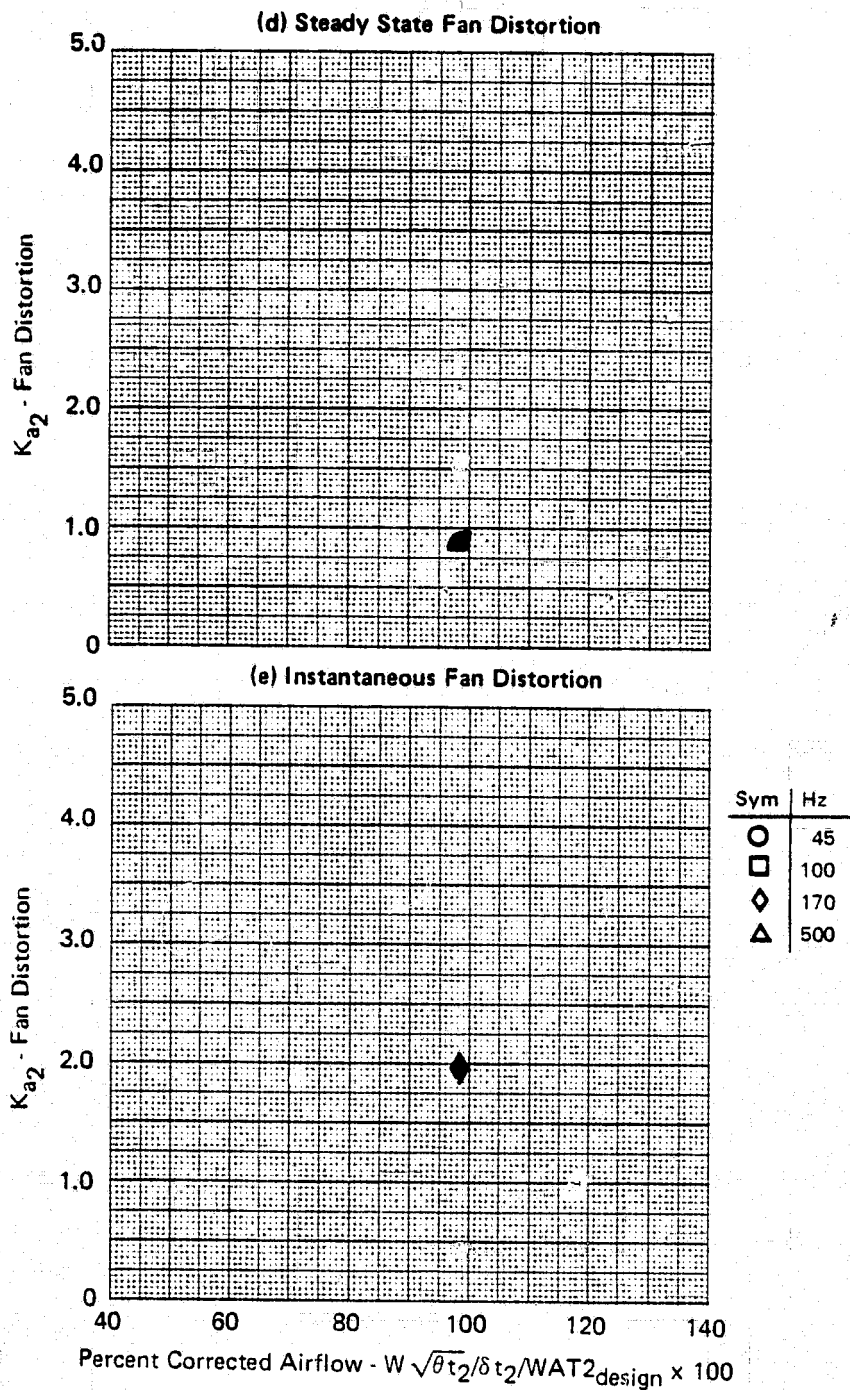
FLIGHT - NASA Data Study
 Part/Point - 423/4, Ident 34
 RHO DELTA3 BYPASS CIVV
 6.0 27.6 0.0 -12.30



GP77-0658-5

FIGURE G-34 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.21$, $\alpha = 1.5$, $\beta = 0.0$, $WAT2 = 98.3\%$

FLIGHT - NASA Data Study
 Part/Point - 423/4, Ident 34
 RHO DELTA3 BYPASS CIVV
 6.0 27.6 0.0 -12.30



GP77-0658-3

FIGURE G-34 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.21$, $\alpha = 1.5$, $\beta = 0.0$, $WAT2 = 98.3\%$

FLIGHT - NASA Data Study
 Part/Point - 423/4, Ident 34
 RHO DELTA3 BYPASS CIVV
 6.0 27.6 0.0 -12.30

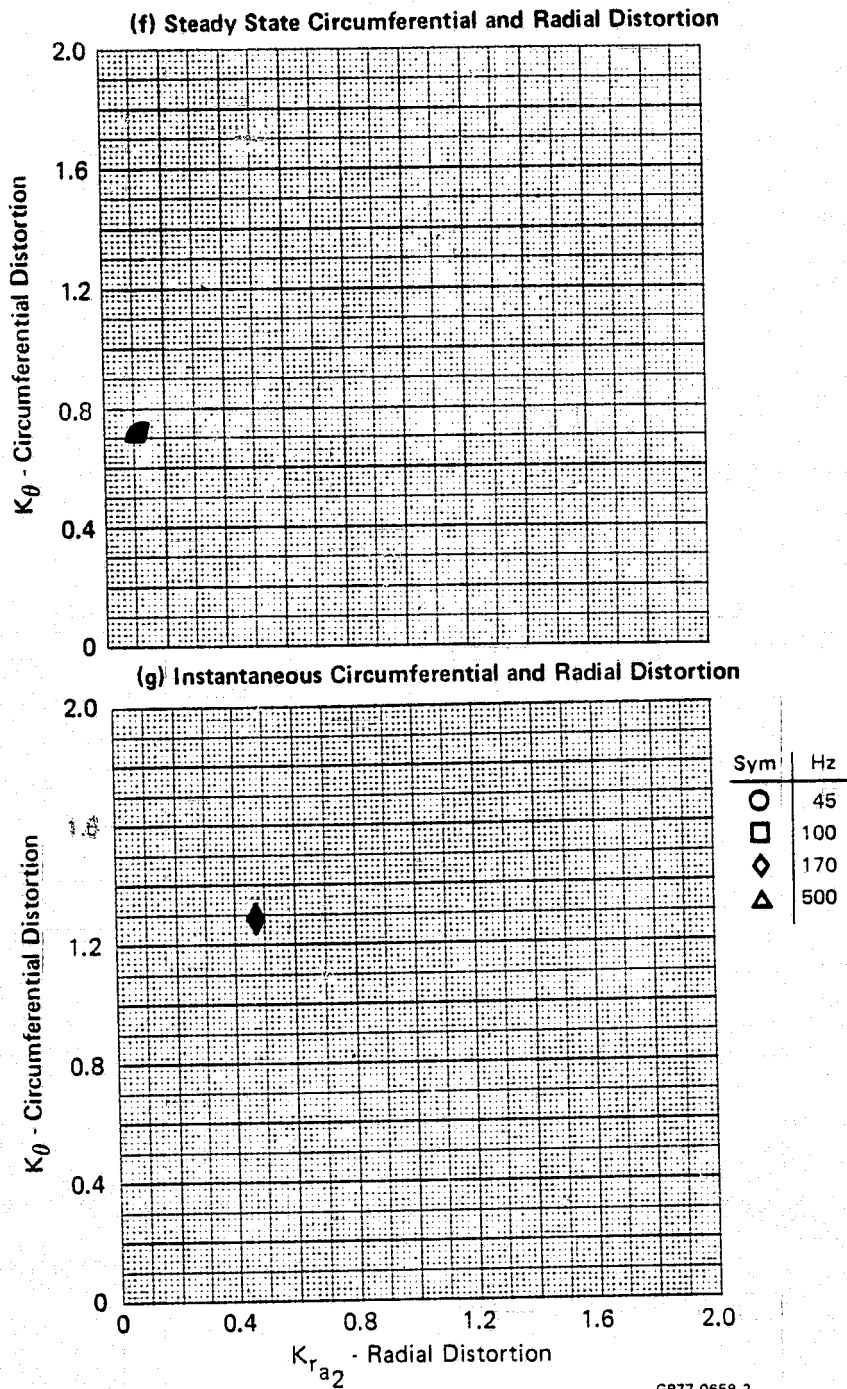


FIGURE G-34 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.21$, $\alpha = 1.5$, $\beta = 0.0$, WAT2 = 98.3%

FLIGHT - NASA Data Study
 Part/Point - 423/4, Ident 34
 RHO DELTA3 BYPASS CIVV
 6.0 27.6 0.0 -12.30

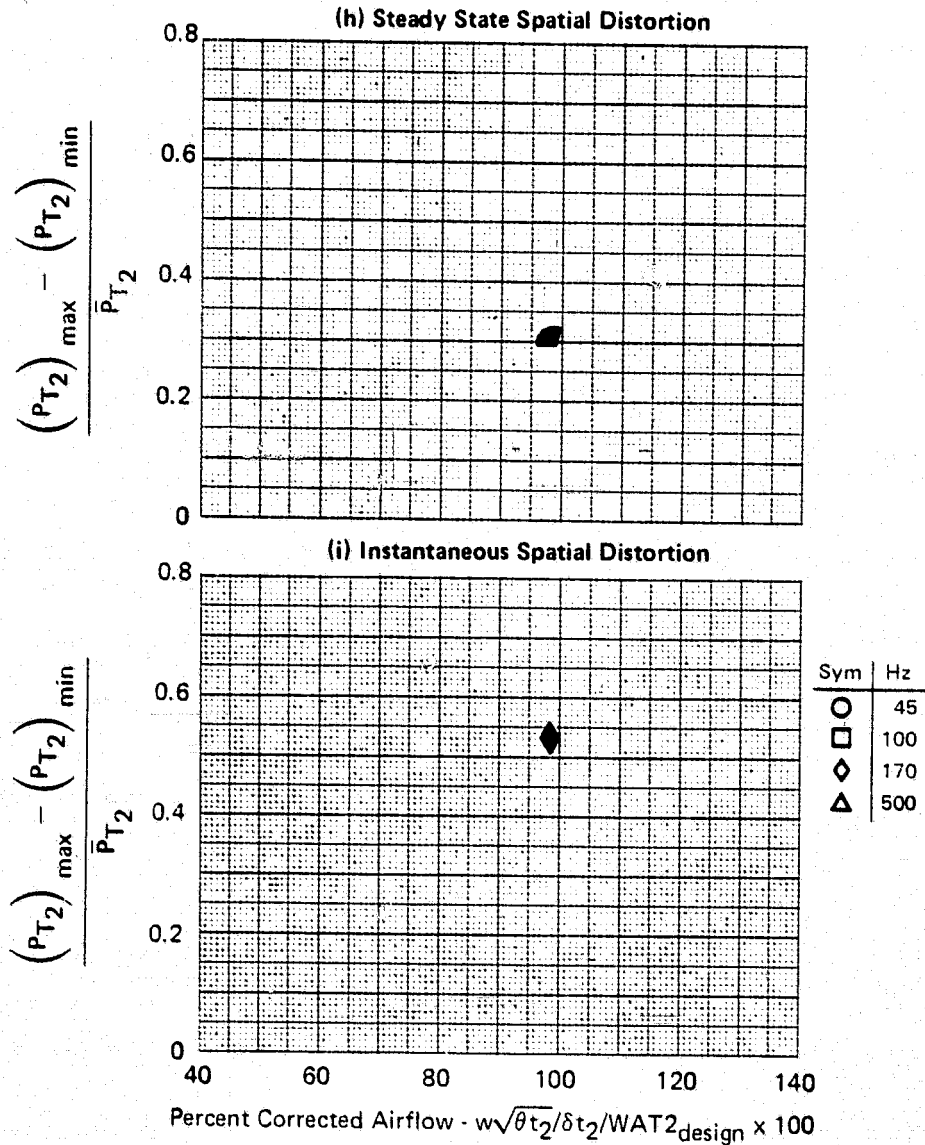


FIGURE G-34 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.21, \alpha = 1.5, \beta = 0.0, WAT2 = 98.3\%$

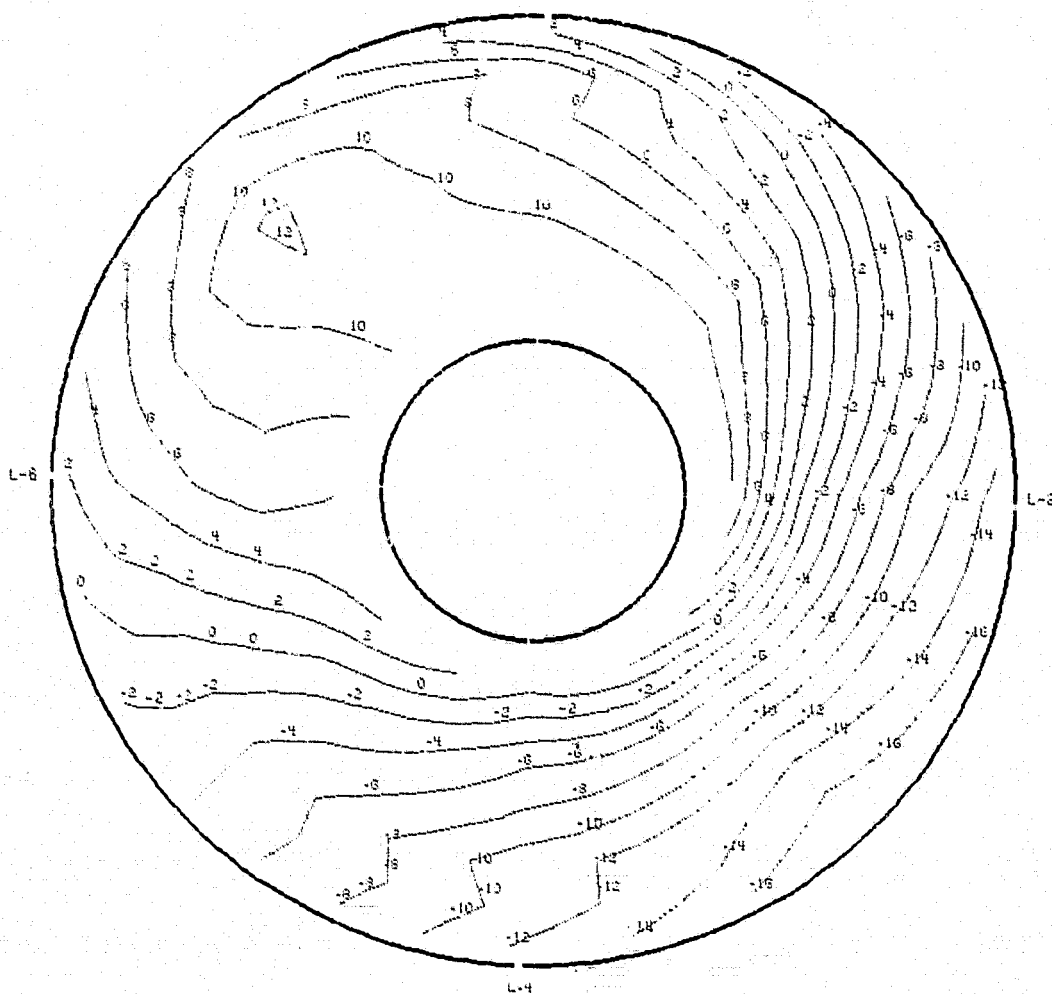
GP77-0658-4

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 423/4 IDENT. 34
THE SEGMENT START TIME WAS AT 21:12:31.794

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.21	1.5	0.0	10434(34233)	6.0	27.6	0.0	98.3%	-12.3
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
41.64(6.040)	1.0	.7087	.1109	.1614	.8732	.5790	—	.3046

34 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 41.64 kPa (6.040 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-34 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.21$, $\alpha = 1.5$, $\beta = 0.0$, $WAT2 = 98.3\%$

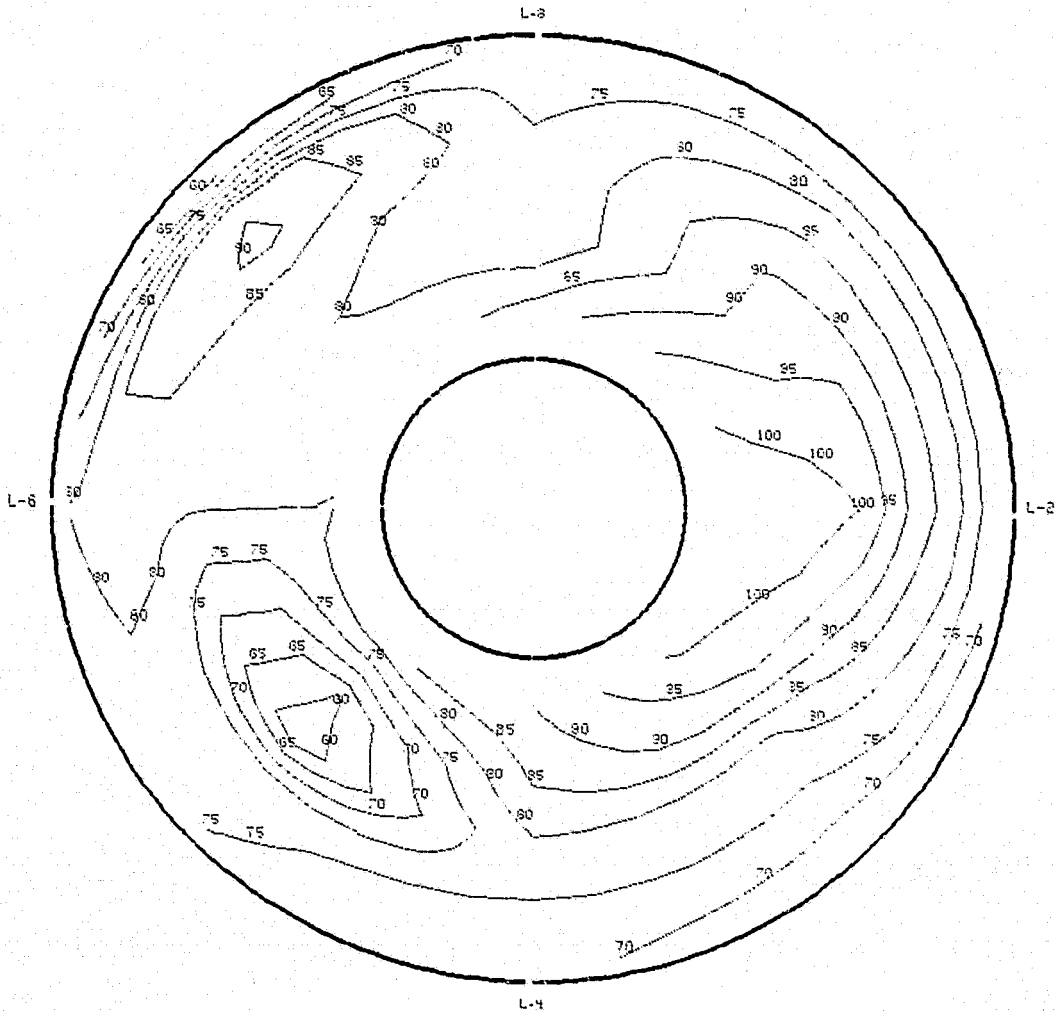
FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 423/4 IDENT. 34

THE SEGMENT START TIME WAS AT 21:12:31.794

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.21	1.5	0.0	10434(34233).	6.0	27.6	0.0	98.3%	-12.3

34(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0809

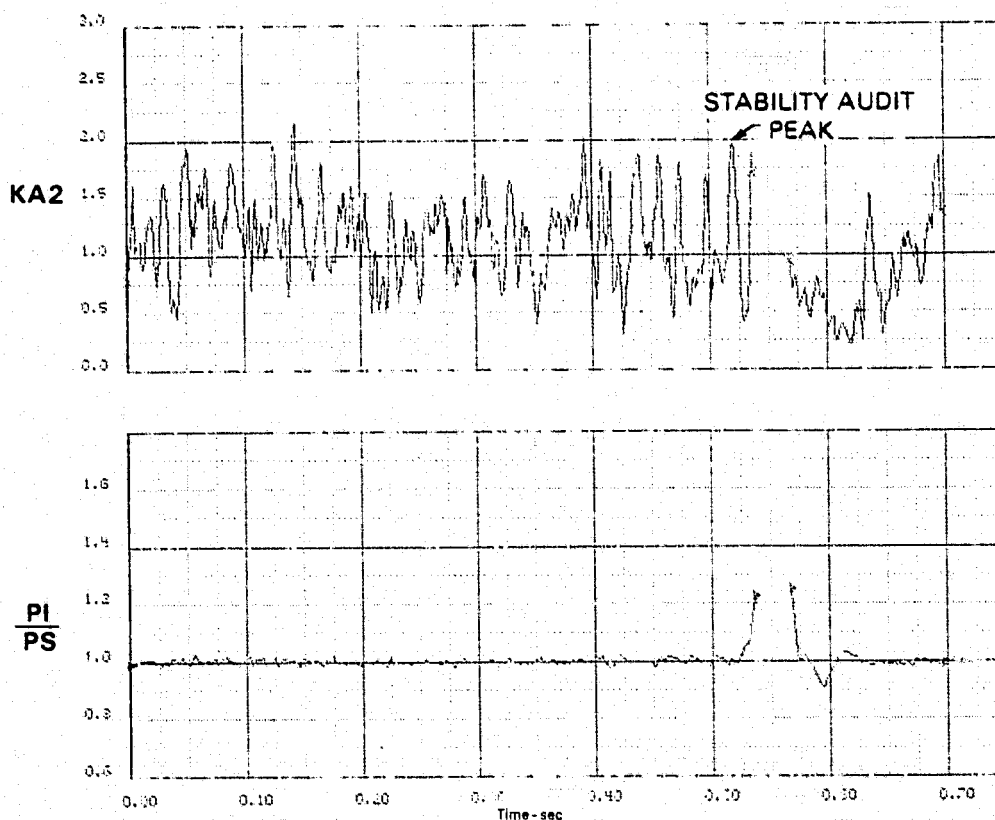
FIGURE G-34 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.21$, $\alpha = 1.5$, $\beta = 0.0$, $WAT2 = 98.3\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 423/4 IDENT. 34
THE SEGMENT START TIME WAS AT 21:12:31.794

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.21	1.5	0.0	10433(34230)	6.0	27.6	0.0	98.3%	-12.3
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
41.58 (6.030)	.9983	1.2914	.4733	.6910	1.9821	1.1350	1.2012	.5338

34(I) Time History Plots 170 Hz



STABILITY AUDIT PEAK AT TIME = .52011 SECONDS

FIGURE G-34 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.21$, $\alpha = 1.5$, $\beta = 0.0$, WAT2 = 98.3 %

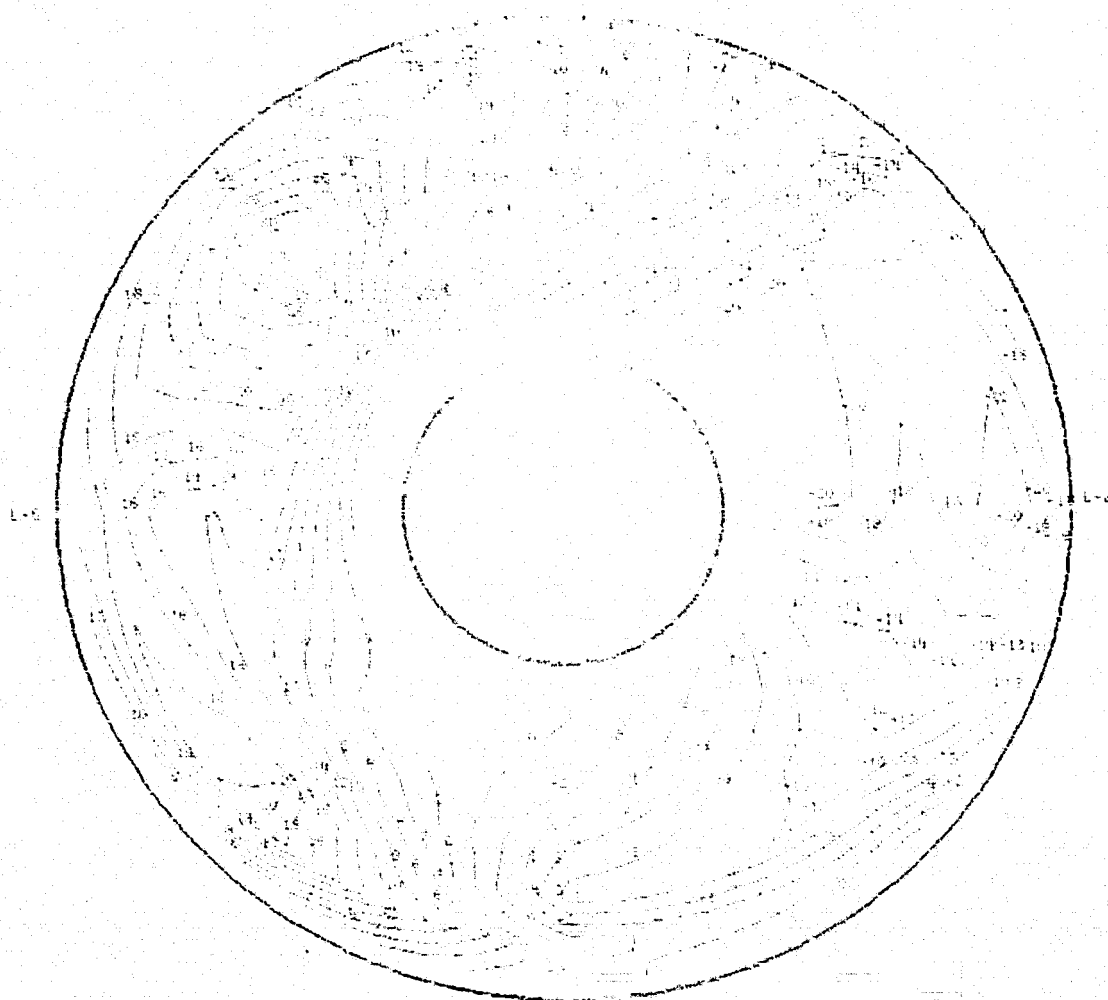
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 423/4 IDENT.34
THE SEGMENT START TIME WAS AT 21:12:31.794

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.21	1.5	0.0	10433(34230)	6.0	27.6	0.0	98.3%	-12.3
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	O2
41.58 (6.030)	.9983	1.2914	.4733	.6910	1.9821	1.1350	1.2012	.5338

34(m)Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 41.16 kPa (5.970 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.52011 SECONDS

FIGURE G-34 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.21$, $\alpha = 1.5$, $\beta = 0.0$, $WAT2 = 98.3\%$

FLIGHT - NASA Data Study
 Part/Point - 423/3, Ident 35
 RHO DELTA3 BYPASS CIVV
 6.7 27.6 0.0 -13.10

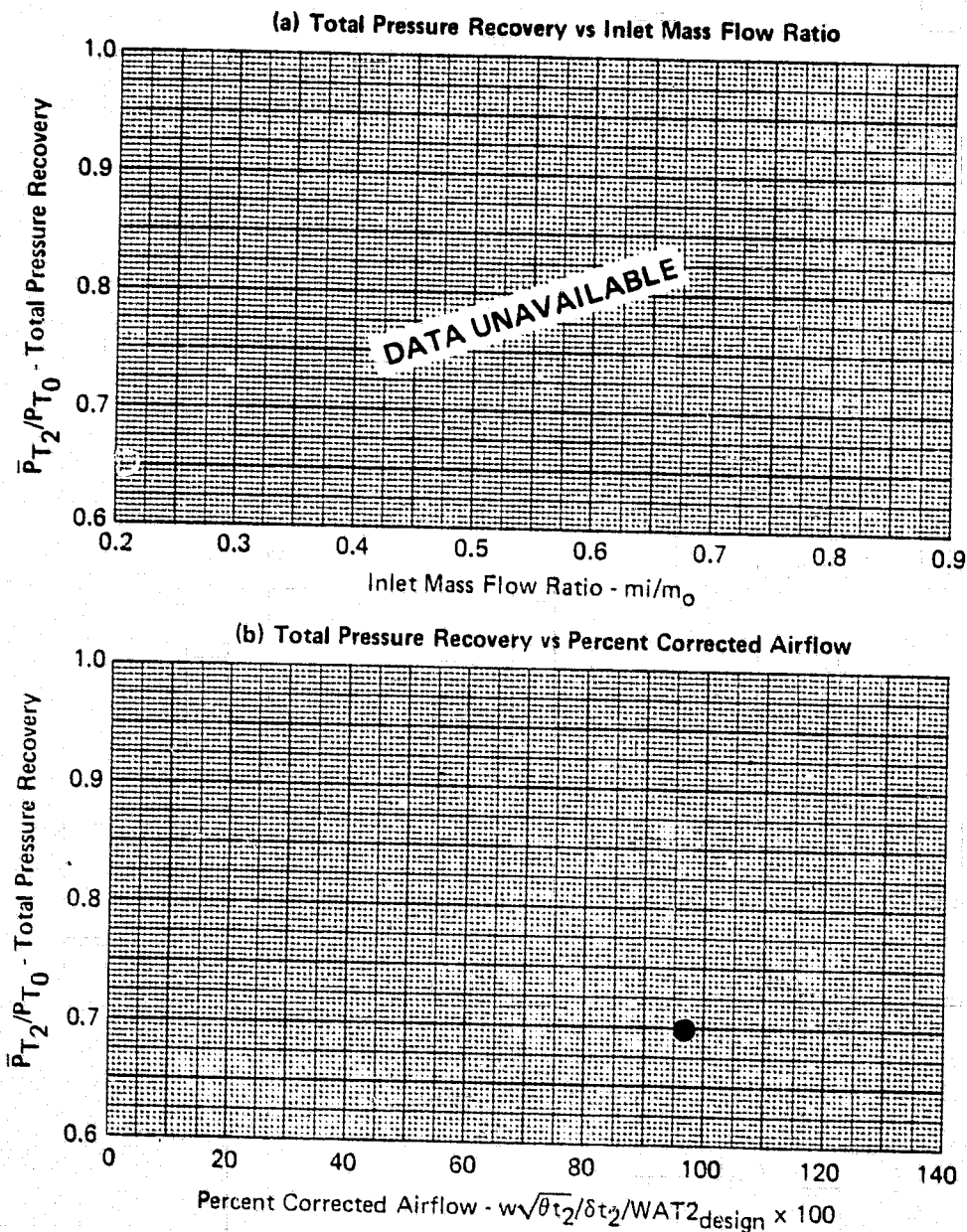
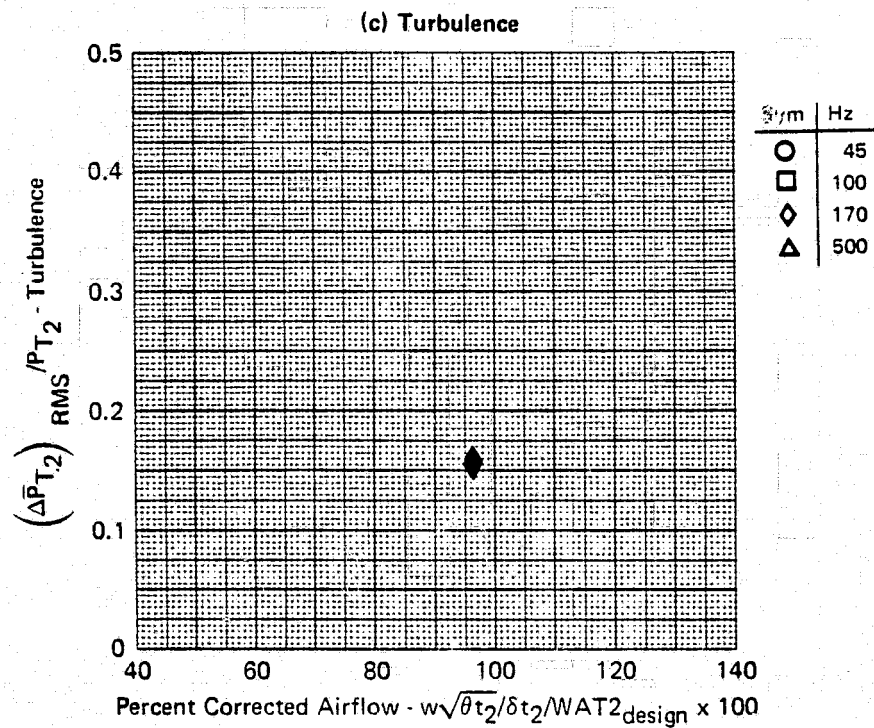


FIGURE G-35
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.24, \alpha = 3.0, \beta = 0.8, WAT2 = 96.4 \%$

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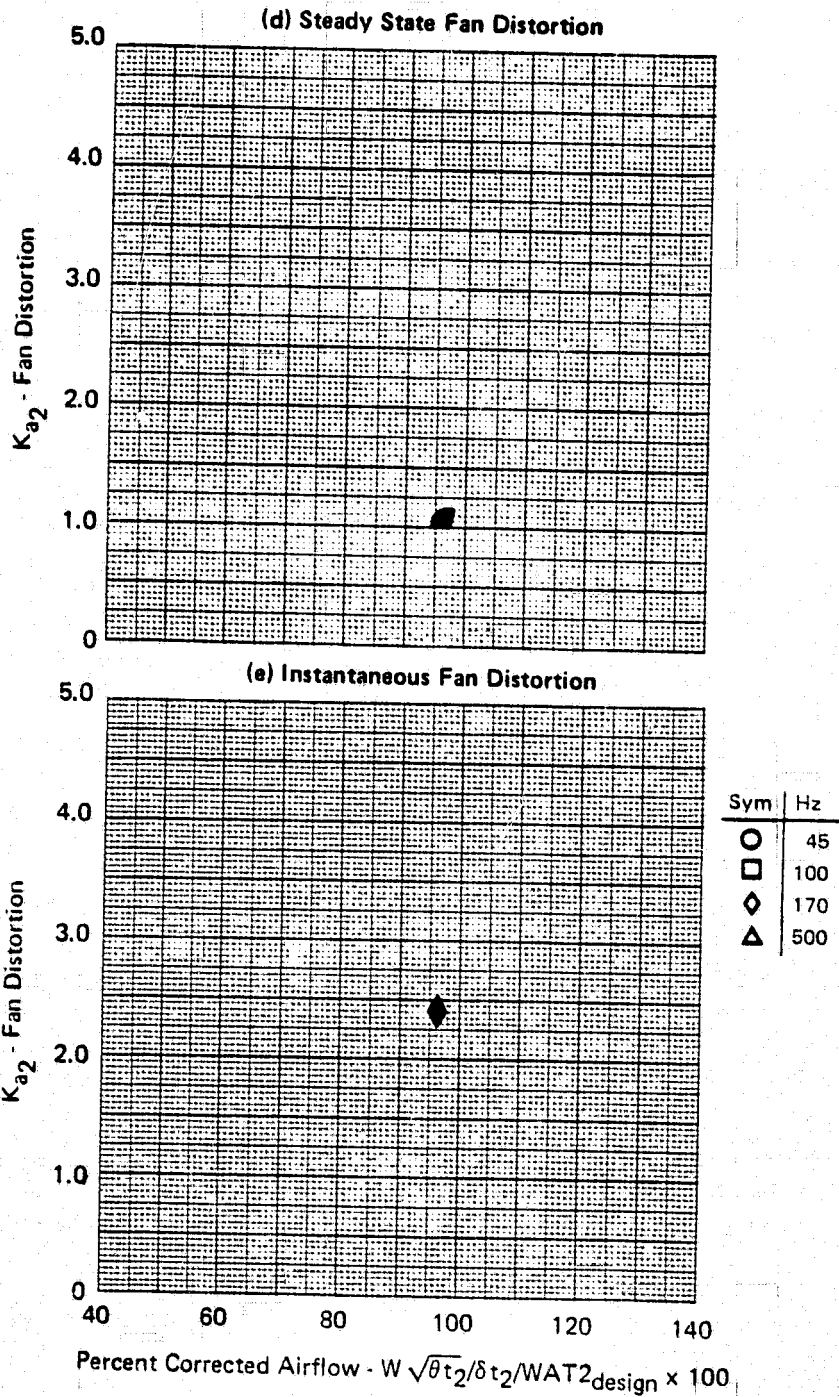
FLIGHT - NASA Data Study
 Part/Point - 423/3, Ident 35
 RHO DELTA3 BYPASS CIVV
 6.7 27.6 0.0 -13.10



GP77-0658-5

FIGURE G-35 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.24$, $\alpha = 3.0$, $\beta = 0.8$, $WAT2 = 96.4\%$

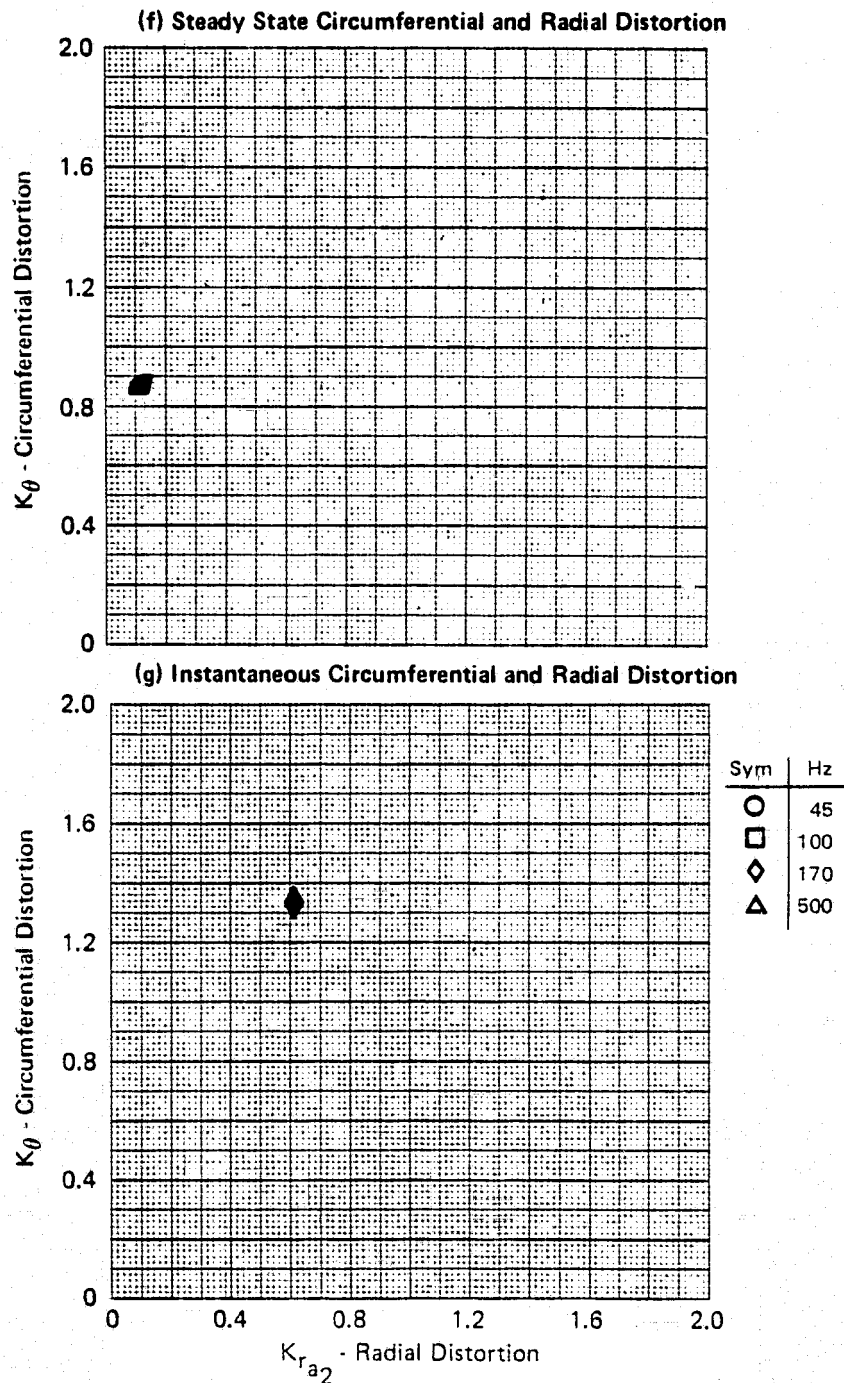
FLIGHT - NASA Data Study
 Part/Point - 423/3, Ident 35
 RHO DELTA3 BYPASS CIVV
 6.7 27.6 0.0 -13.10



GP77-0658-3

FIGURE G-35 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.24$, $\alpha = 3.0$, $\beta = 0.8$, $WAT2 = 96.4\%$

FLIGHT - NASA Data Study
 Part/Point - 423/3, Ident 35
 RHO DELTA3 BYPASS CIVV
 6.7 27.6 0.0 -13.10



GP77-0658-2

FIGURE G-35 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.24$, $\alpha = 3.0$, $\beta = 0.8$, WAT2 = 96.4 %

FLIGHT - NASA Data Study
 Part/Point - 423/3, Ident 35
 RHO DELTA3 BYPASS CIVV
 6.7 27.6 0.0 -13.10

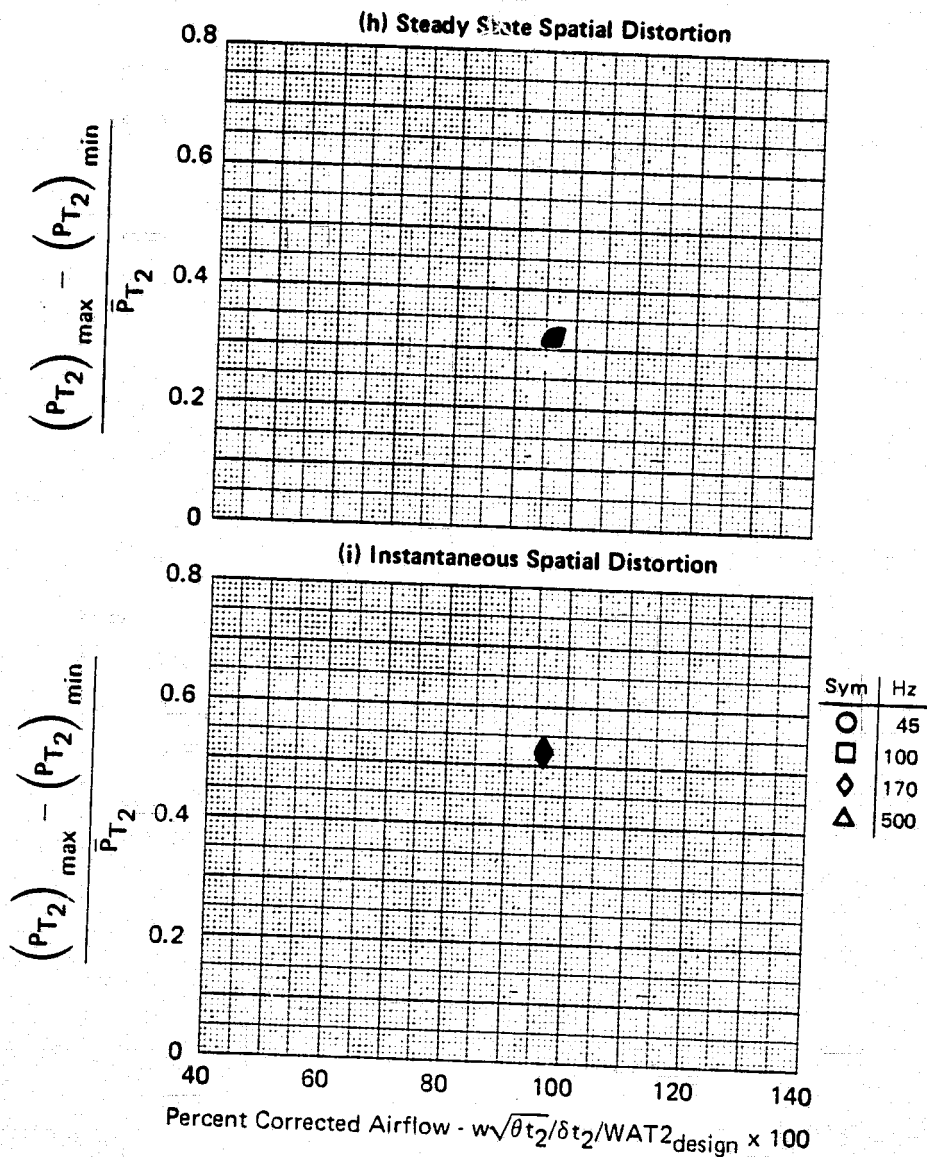


FIGURE G-35 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.24$, $\alpha = 3.0$, $\beta = 0.8$, $WAT2 = 96.4\%$

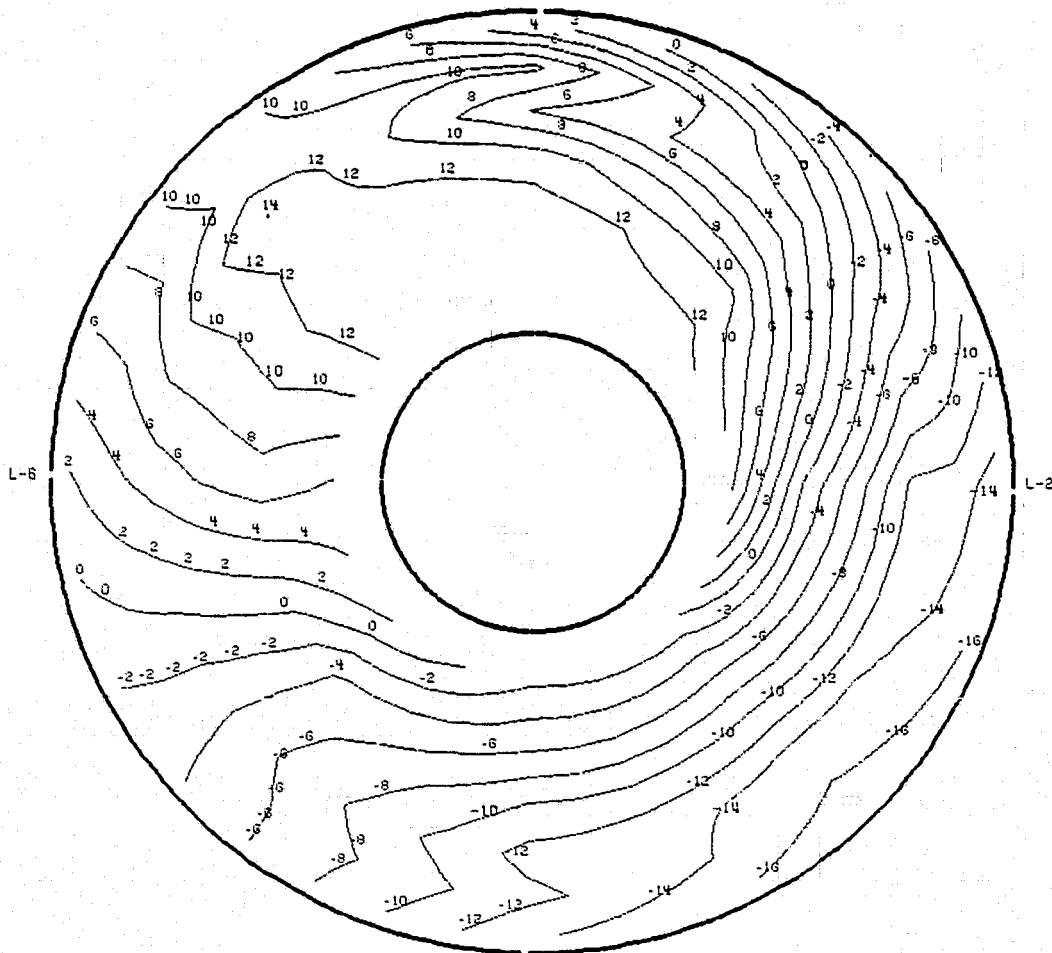
GP77-0658-4

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 423/3 IDENT. 35
THE SEGMENT START TIME WAS AT 21:07:56.594

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.24	3.0	0.8	15039(49339)	6.7	27.6	0.0	96.4%	-13.10
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	KOSP	D2
21.43(3.108)	1.0	.8666	.1336	.2350	1.1070	.7436	—	.3146

35(j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 21.43 kPa (3.108 PSIA)

NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

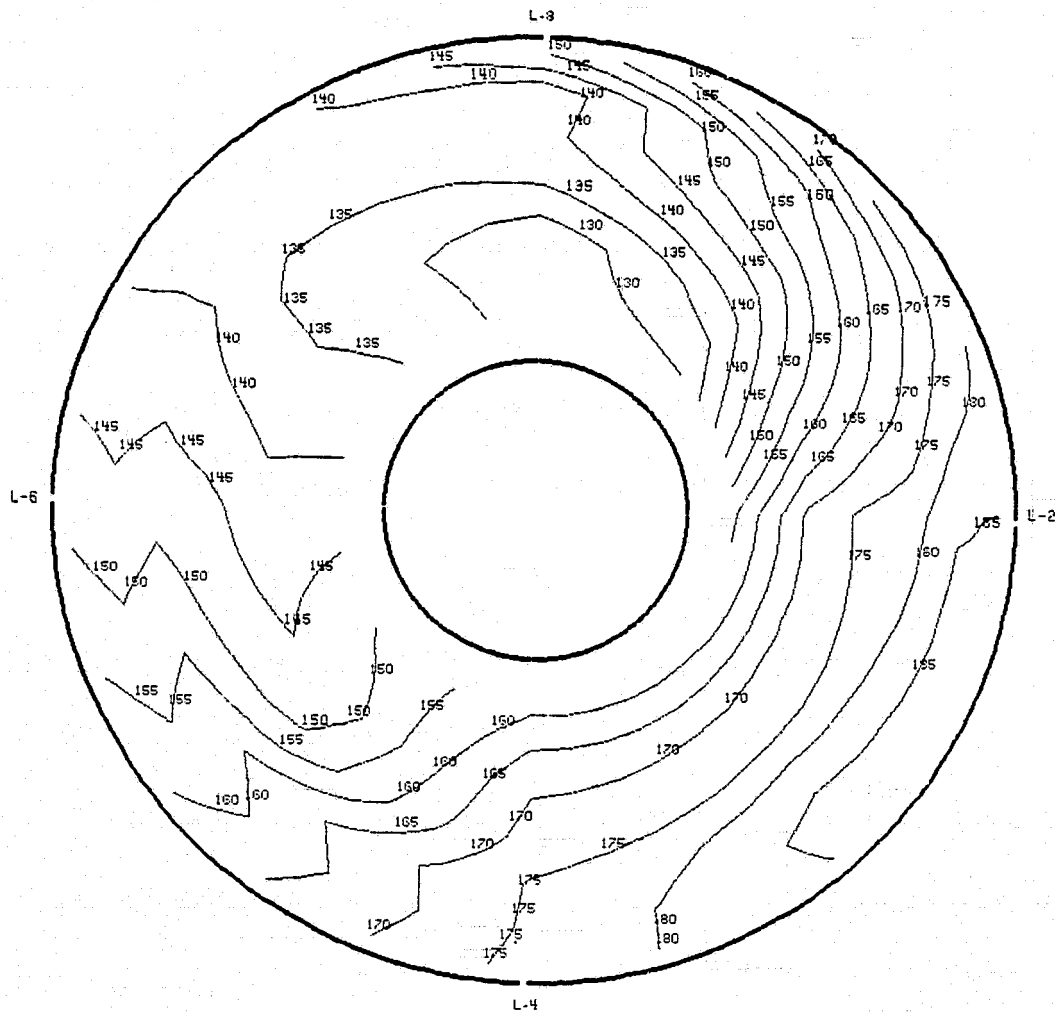
FIGURE G-35 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.24$, $\alpha = 3.0$, $\beta = 0.8$, WAT2 = 96.4 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 423/3 IDENT. 35
THE SEGMENT START TIME WAS AT 21:07:56.594

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.24	3.0	0.8	15039(49339)	6.7	27.6	0.0	96.4%	-13.10

35(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.1557

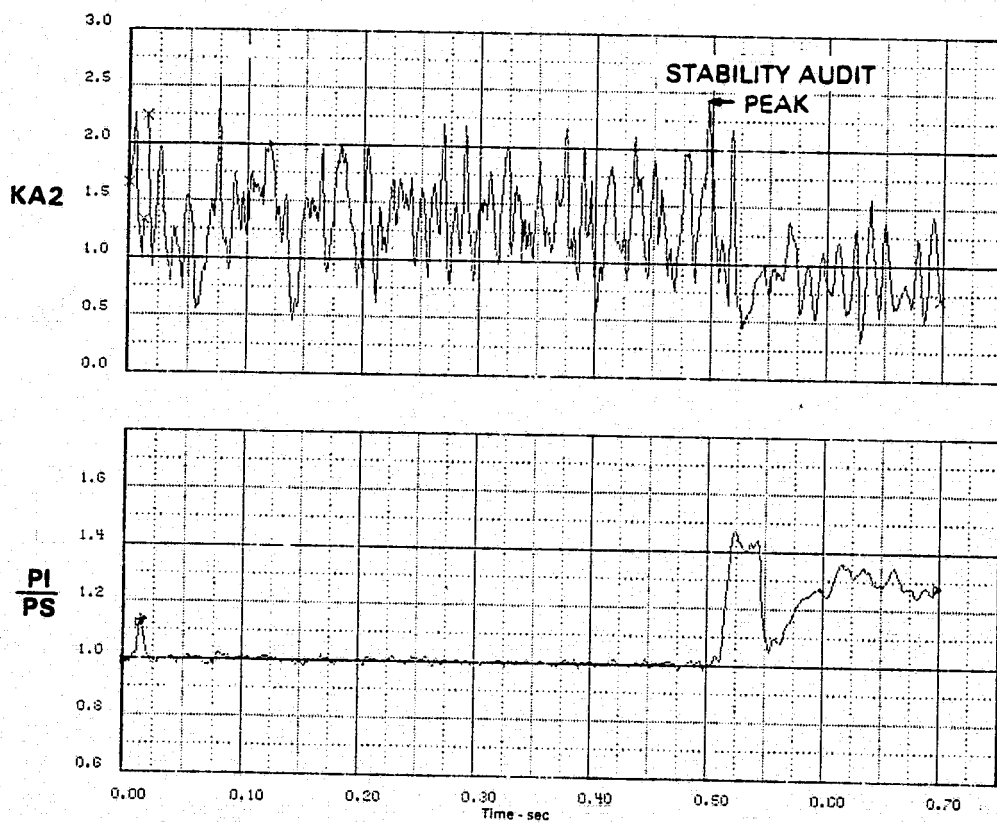
FIGURE G-35 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.24$, $\alpha = 3.0$, $\beta = 0.8$, $WAT2 = 96.4\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 423/3 IDENT. 35
THE SEGMENT START TIME WAS AT 21:07:56.594

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.24	3.0	0.8	15042(49350)	6.7	27.6	0.0	96.4%	-13.10
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
21.24 (3.08)	.9910	1.3372	.6064	1.0800	2.4172	.9226	1.0372	.5242

35(I) Time History Plots 170 Hz



STABILITY AUDIT PEAK AT TIME = .49678 SECONDS

FIGURE G-35 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.24$, $\alpha = 3.0$, $\beta = 0.8$, WAT2 = 96.4 %

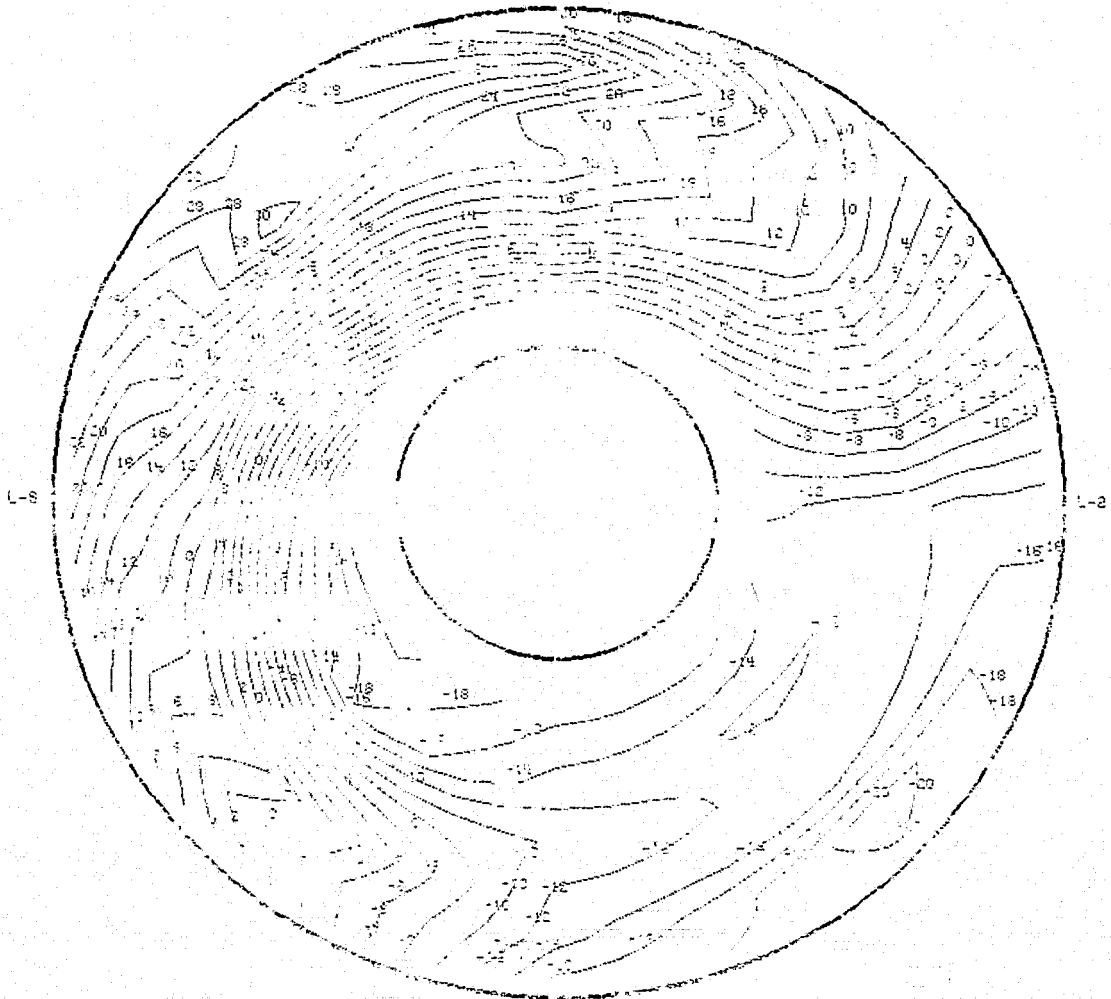
C-5

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 423/3 IDENT. 35
THE SEGMENT START TIME WAS AT 21:07:56.594

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.24	3.0	0.8	15042(49350)	6.7	27.6	0.0	96.4%	-13.10
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
21.24 (3.08)	.9910	1.3372	.6064	1.0800	2.4172	.9226	1.0372	.5242

35(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 20.96 kPa (3.040 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.49678 SECONDS

FIGURE G-35 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.24$, $\alpha = 3.0$, $\beta = 0.8$, WAT2 = 96.4 %

SERIES VII - NASA Data Study
Part/Point - 131/7, Ident 36

RHO	DELTA3	BYPASS	CIVV
7.0	10.6	0.0	-25.00

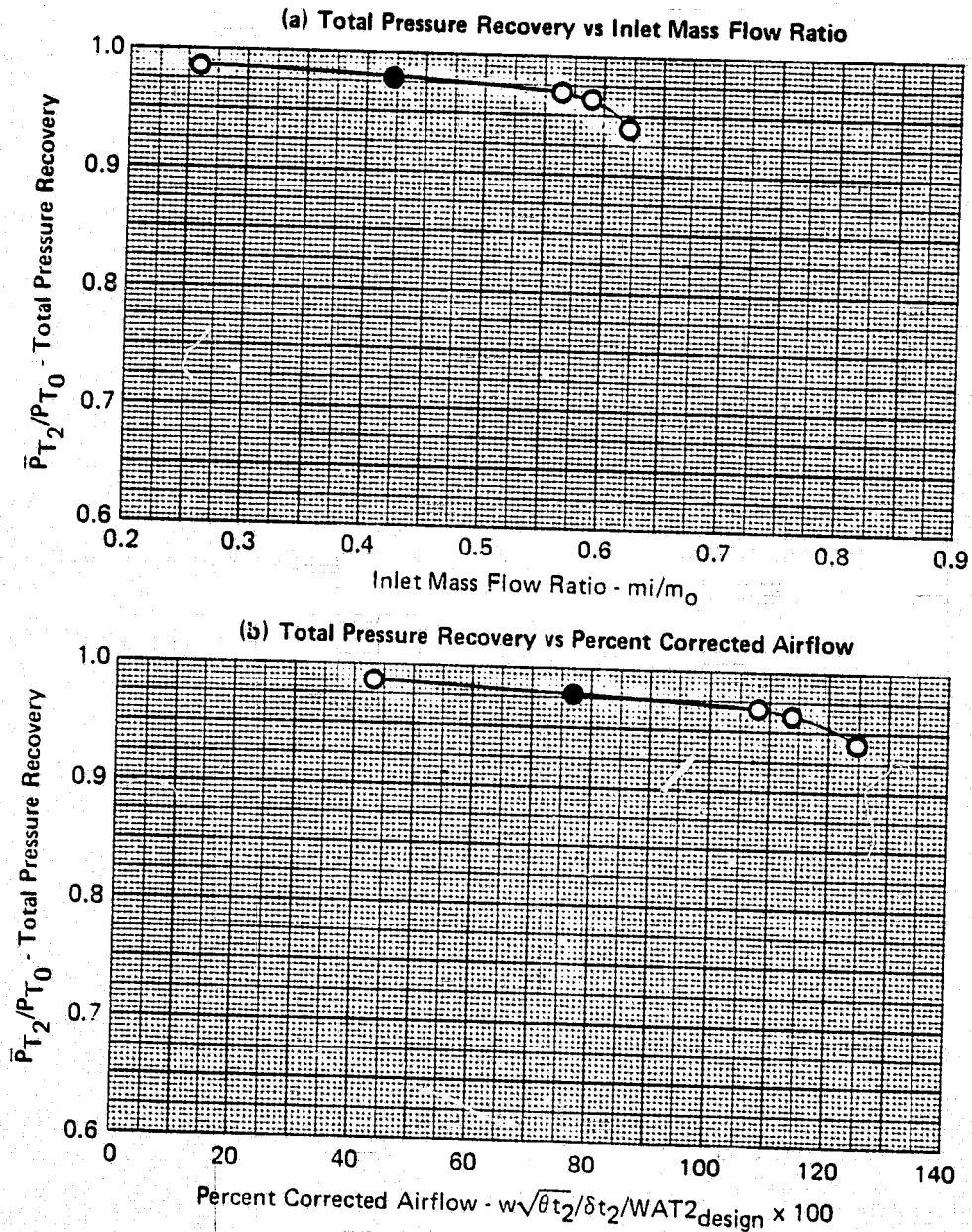
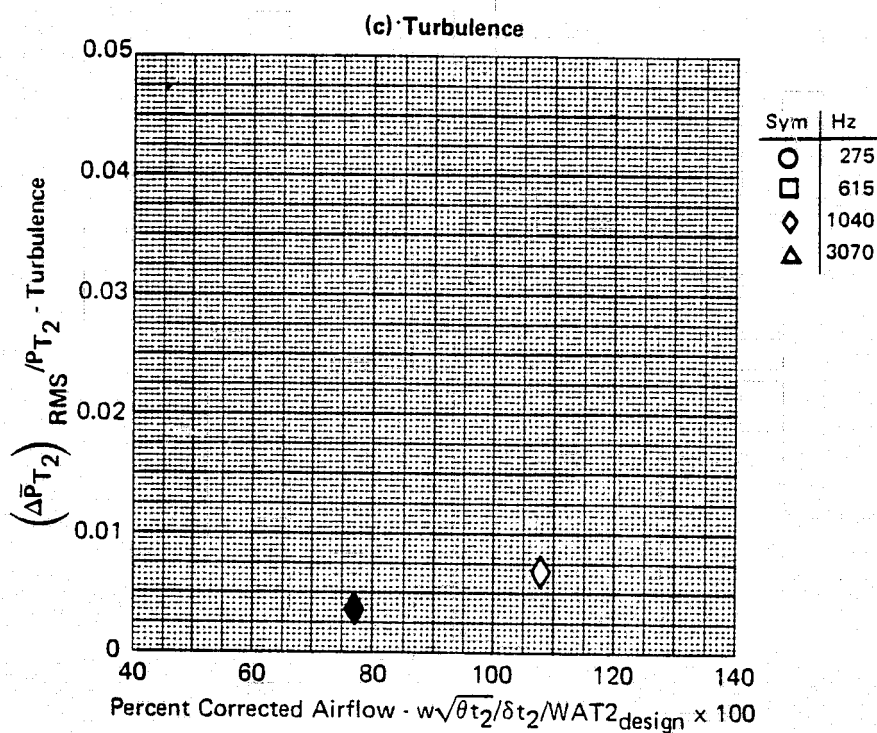


FIGURE G-36
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, $WAT2 = 76.6\%$

GP77-0858-1

SERIES VII - NASA Data Study
 Part/Point - 131/7, Ident 36
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -25.00



GP77-0658-5

FIGURE G-36 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, $WAT2 = 76.6\%$

SERIES VII - NASA Data Study
 Part/Point - 131/7, Ident 36
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -25.00

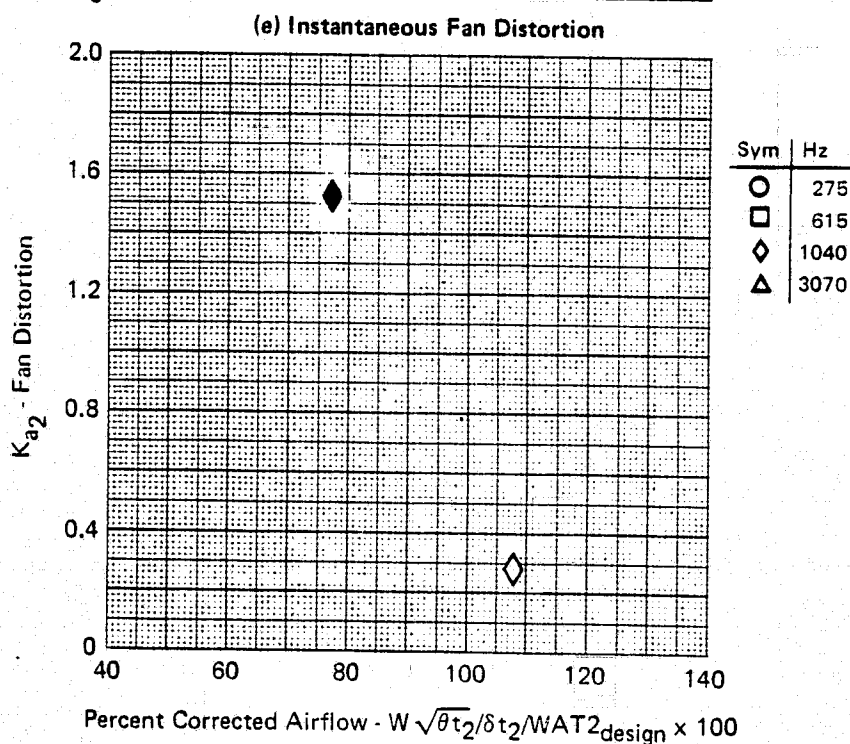
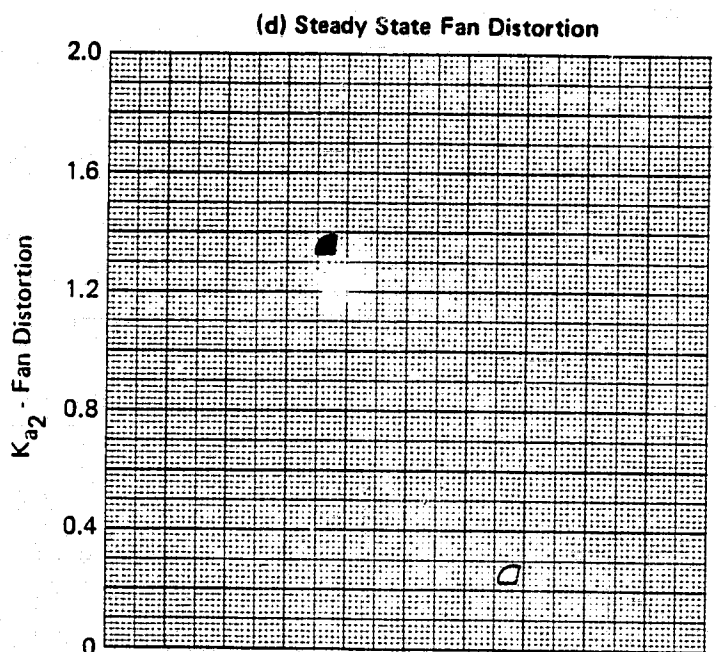


FIGURE G-36 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, $WAT2 = 76.6\%$

GP77-0658-3

SERIES VII - NASA Data Study
 Part/Point - 131/7, Ident 36
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -25.0

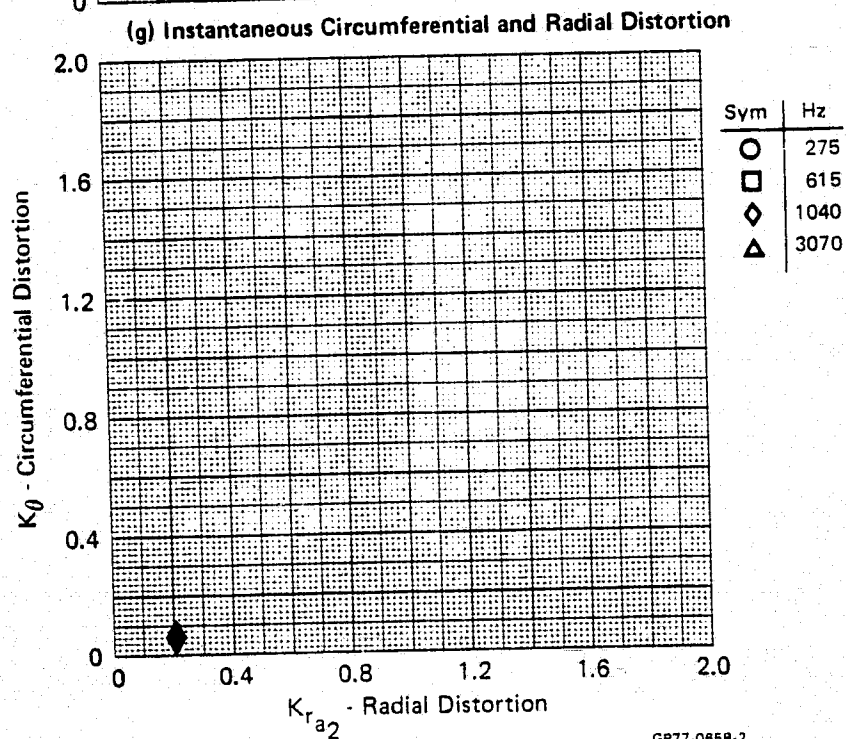
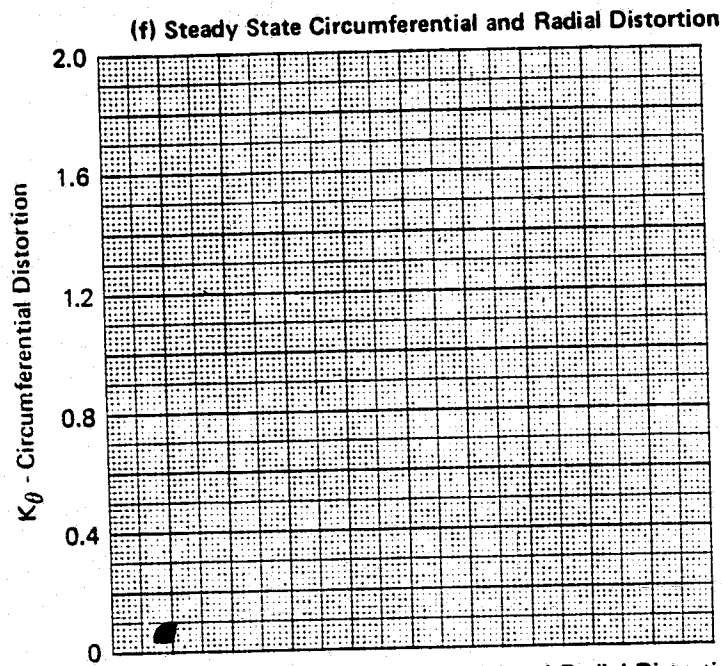
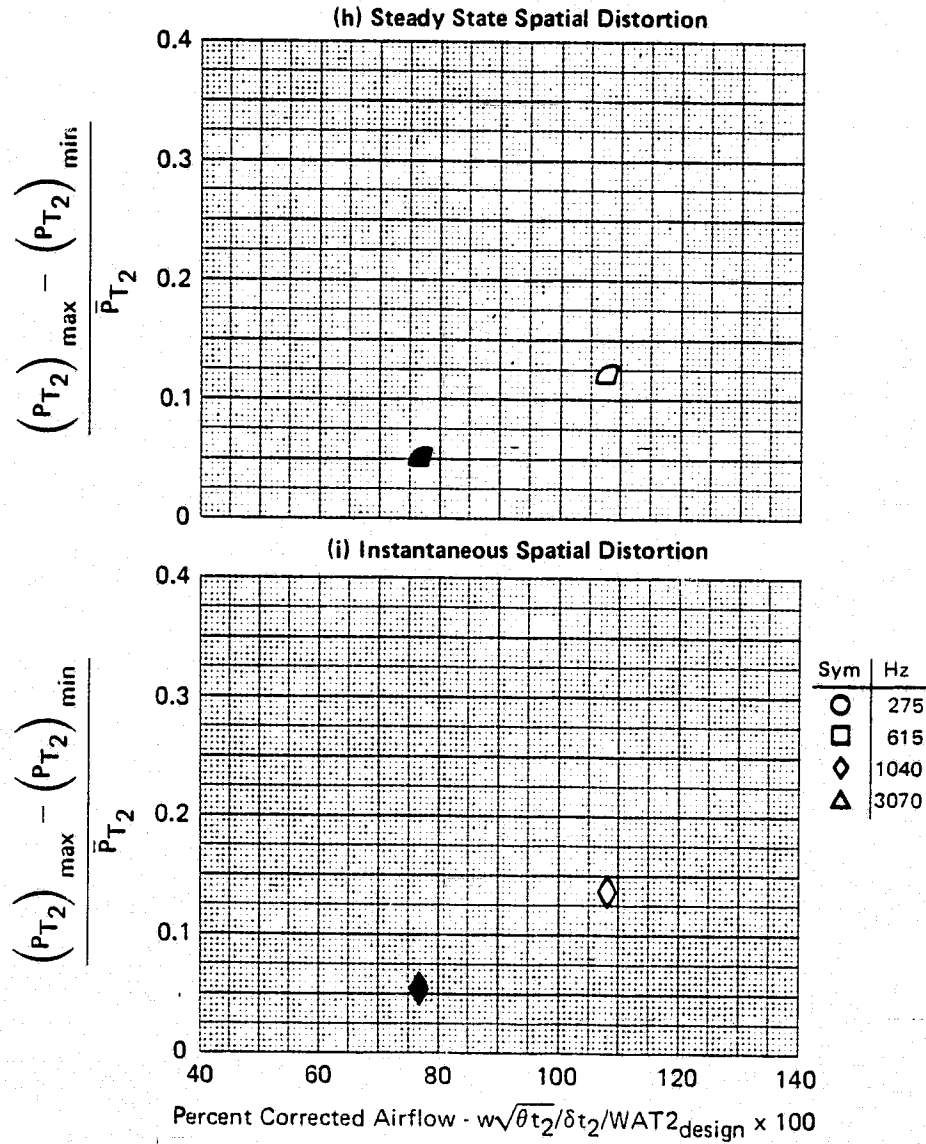


FIGURE G-36 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, WAT2 = 76.6 %

GP77-0858-2

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SERIES VII - NASA Data Study
 Part/Point - 131/7, Ident 36
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -25.00



GP77-0658-4

FIGURE G-36 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, $WAT2 = 76.6\%$

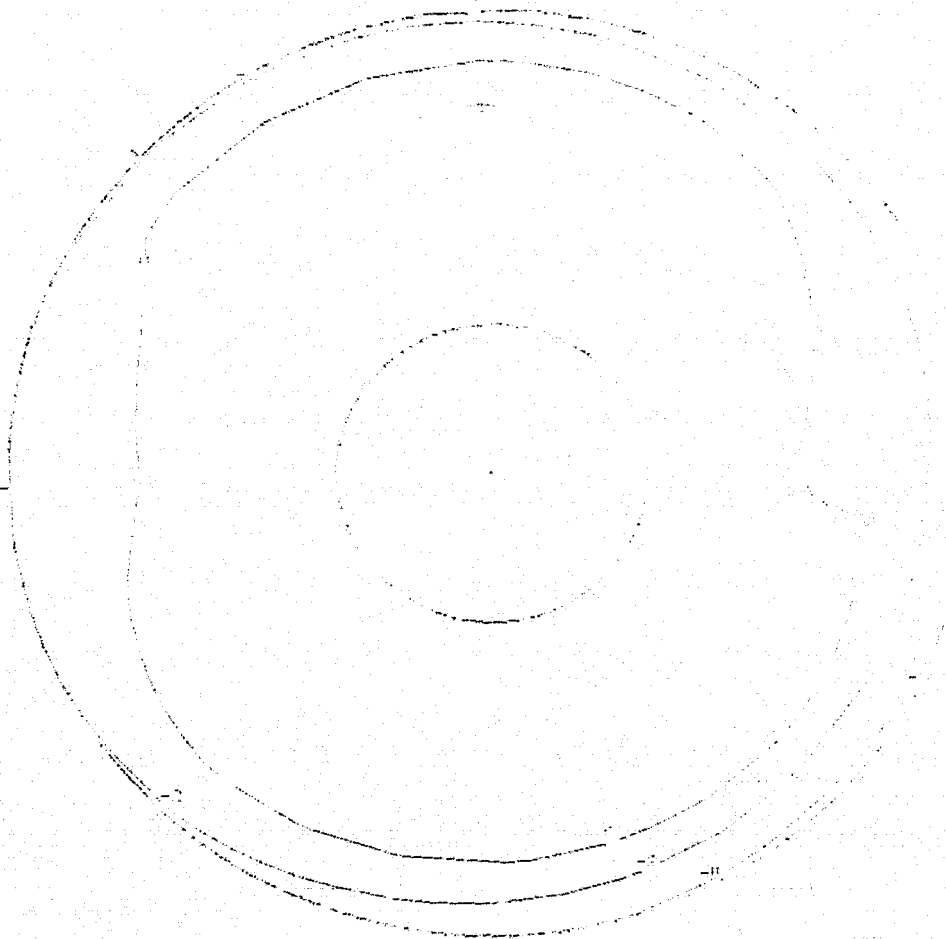
REFLECTED WAVE ANALYSIS REPORT

DATE: 08/01/2011 11:11 AM 36
 THE REFLECTED WAVE ANALYSIS REPORT

INLET 1.2 SURF 10.0 CASE 1.0000 DIST. 10.0000 ENERGY 10.0000 WAT2 76.6% SURF 10.0000

63.27 (9.176)

36 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 63.27 kPa (9.176 PSIA)
 NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
 FROM MEAN FACE PRESSURE.

FIGURE G-36 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, WAT2 = 76.6 %

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SERIES VII - NASA DATA STUDY

DATA POINT/POINT 101 / 7 POINT 36
THE SEGMENT START TIME WAS AT 8:14:22.045

MACH
1.2

ALPHA
10

BETA
0

BAND
7

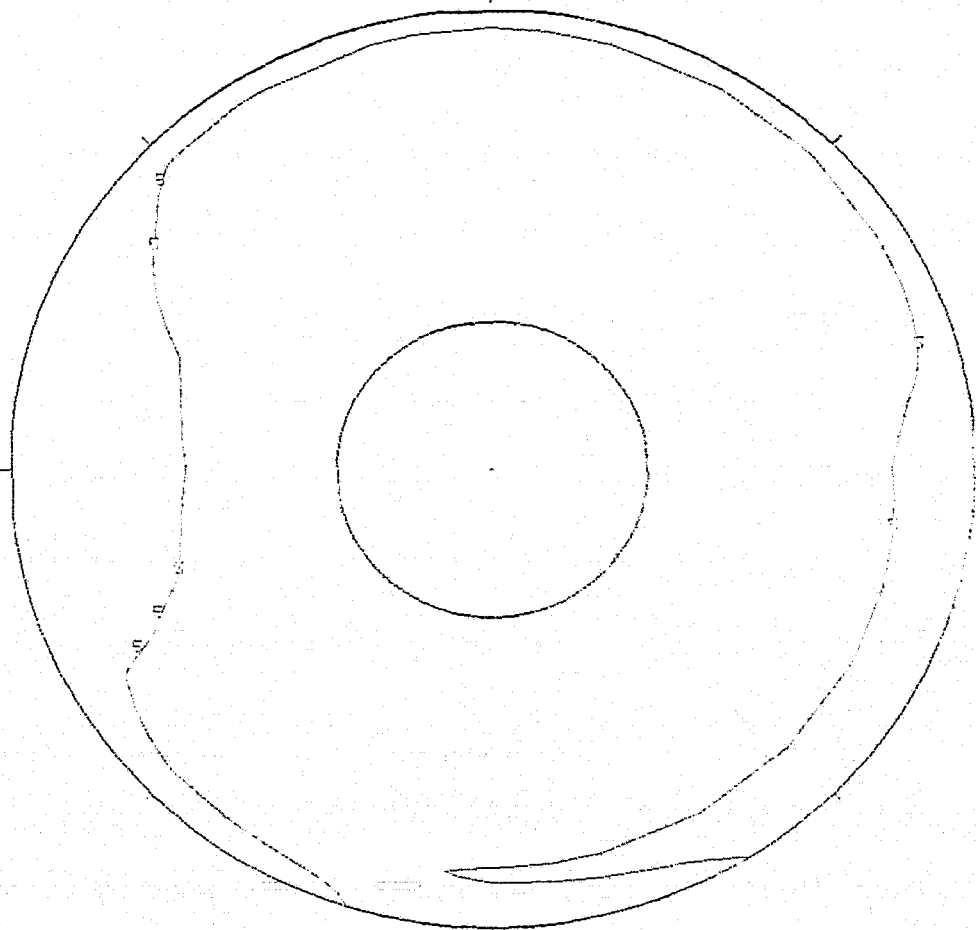
COLTOS
11.0

EMPOSS
0.0

WAT2
76.6%

CIVV
-25.0

**36(k) Turbulence Contour
1040 Hz**



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00361

FIGURE G-36 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, WAT2 = 76.6 %

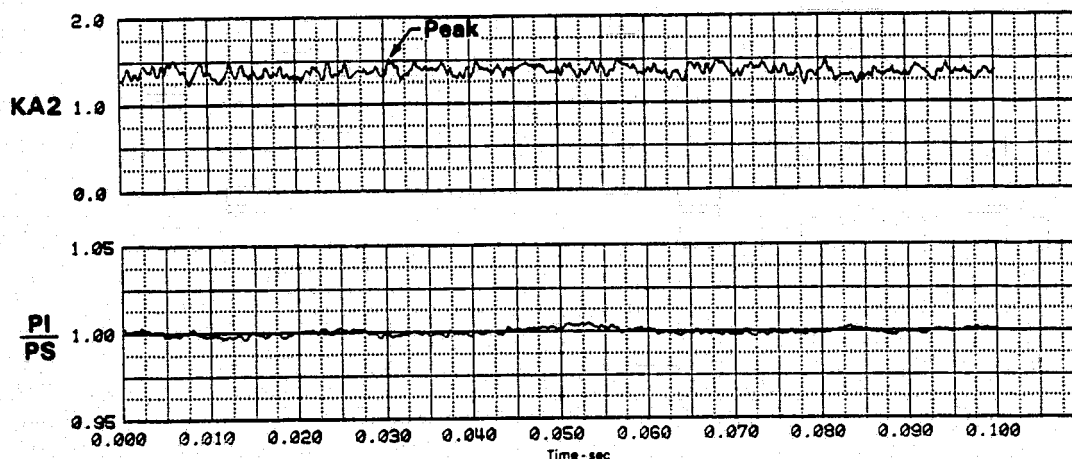
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OF POOR QUALITY

SERIES VII - NASA DATA STUDY

DATA PART/POINT 131 / 7 IDENT. 36
THE SEGMENT START TIME WAS AT 3:14:22.045

MACH 1.2	ALPHA 10	BETA 0	RHO 7.0	DELTA2 10.6	BYPASS 0.0	WAT2 76.6%	CIVV -25.0
P1 63.07 (9.148)	PI/PS 0.997	KTHETA 0.065	KRA2 0.209	BKRA2 1.482	KA2 1.527	KC2 0.040	KCSP 0.049
							D2 0.056

36(I) Time History Plots 1040 Hz



PEAK AT TIME = 0.030690 SECONDS

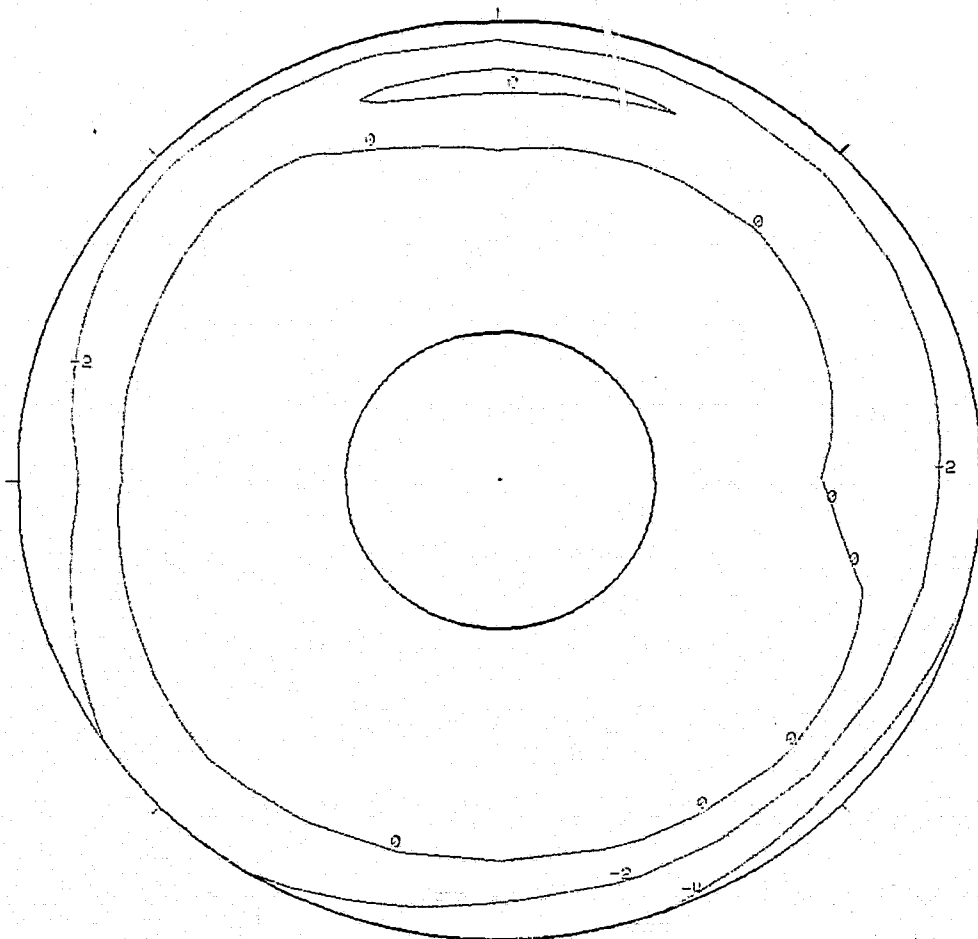
FIGURE G-36 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, WAT2 = 76.6 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 131 / 7 IDENT. 36
THE SEGMENT START TIME WAS AT 2:14:22.045

MACH 1.2	ALPHA 10	BETA 0	BH0 7.0	DELTA2 10.6	BYPASS 0.0	WAT2 76.6%	CIVV -25.0
P1 63.07 (9.148)	P1/PS 0.939	KTHETA 0.035	KPA2 0.293	BKPA2 1.482	KD2 1.527	KC2 0.040	KOSP 0.049
							D2 0.056

36(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 1040 Hz



MEAN FACE PRESSURE = 63.07 kPa (9.148 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.030690 SECONDS

FIGURE G-36 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, $WAT2 = 76.6\%$

SERIES VII - NASA Data Study
Part/Point - 131/5, Ident 37

RHO DELTA3 BYPASS CIVV
7.0 10.6 0.0 -5.00

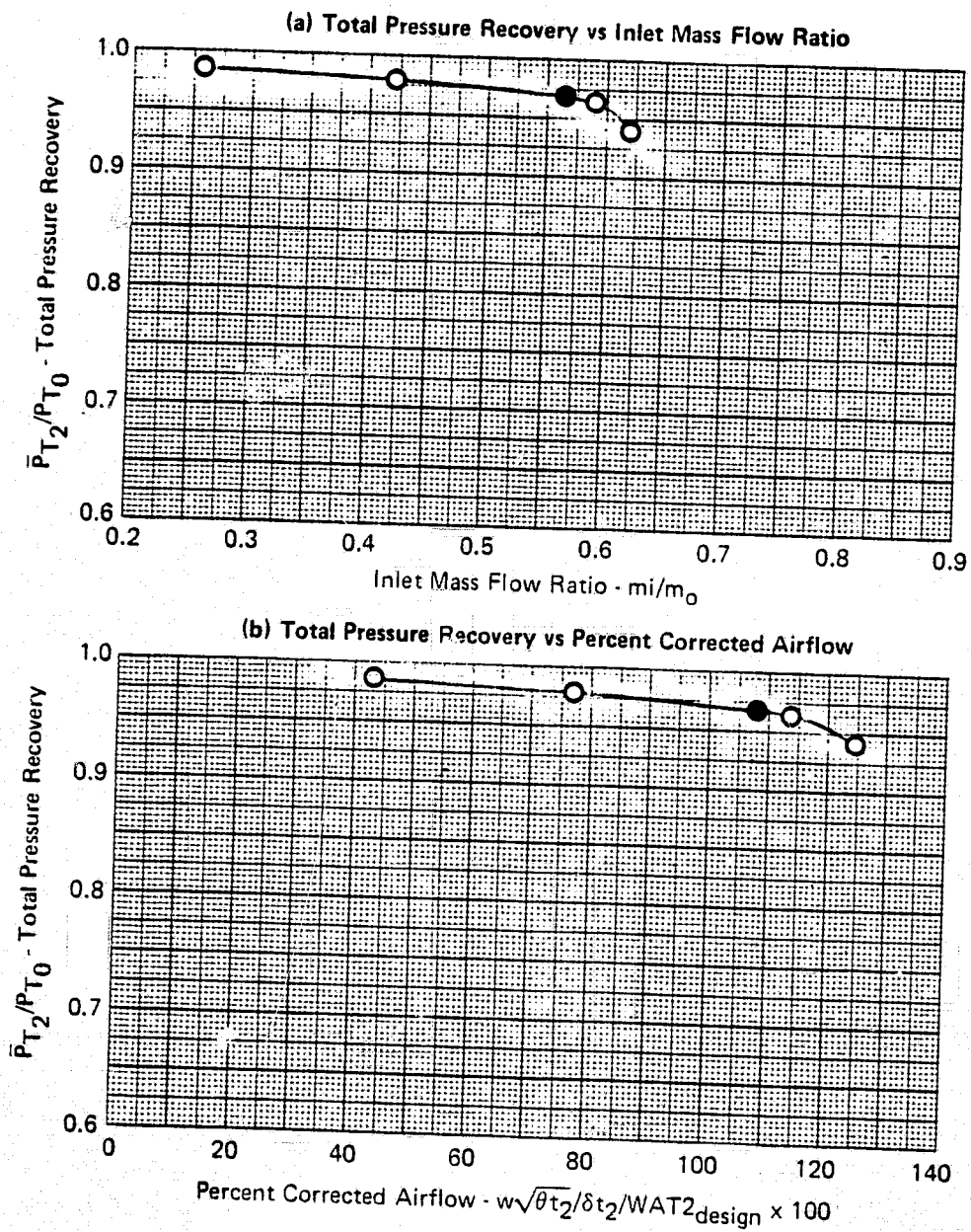
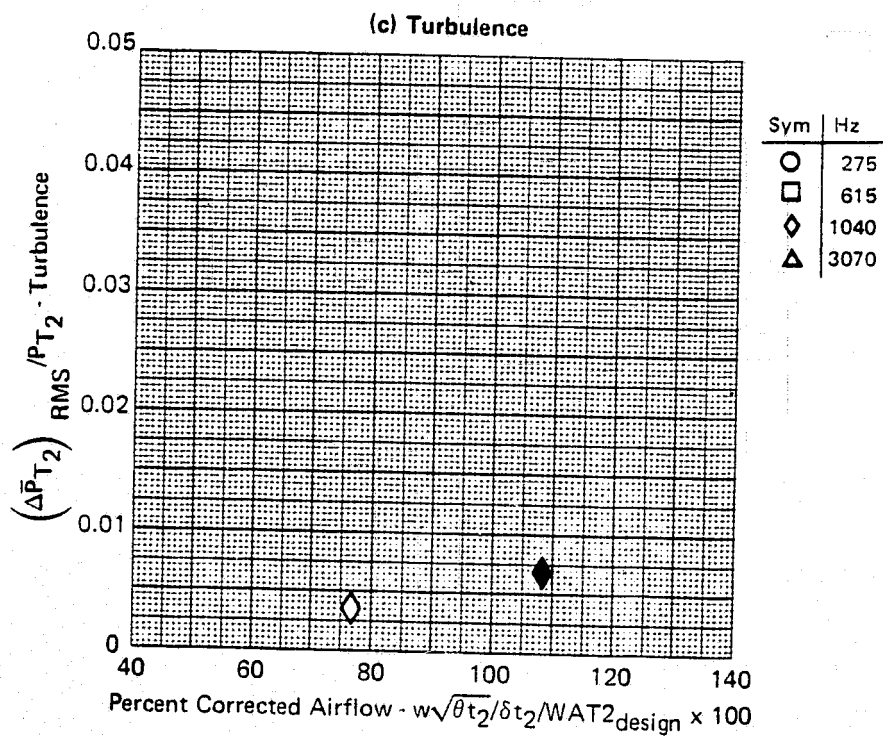


FIGURE G-37
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, $WAT2 = 107.9\%$

GP77-0658-1

SERIES VII - NASA Data Study
 Part/Point - 131/5, Ident 37
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -5.00



GP77-0658-5

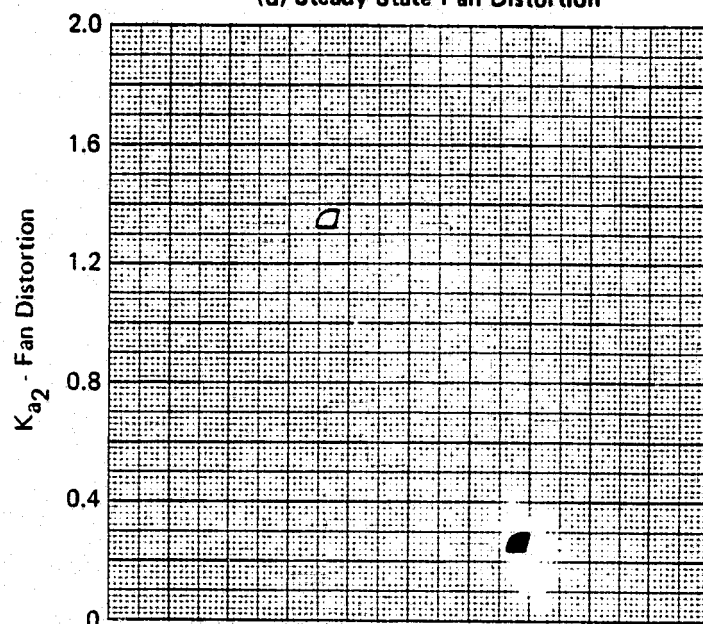
FIGURE G-37 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, $WAT2 = 107.9\%$

SERIES VII - NASA Data Study

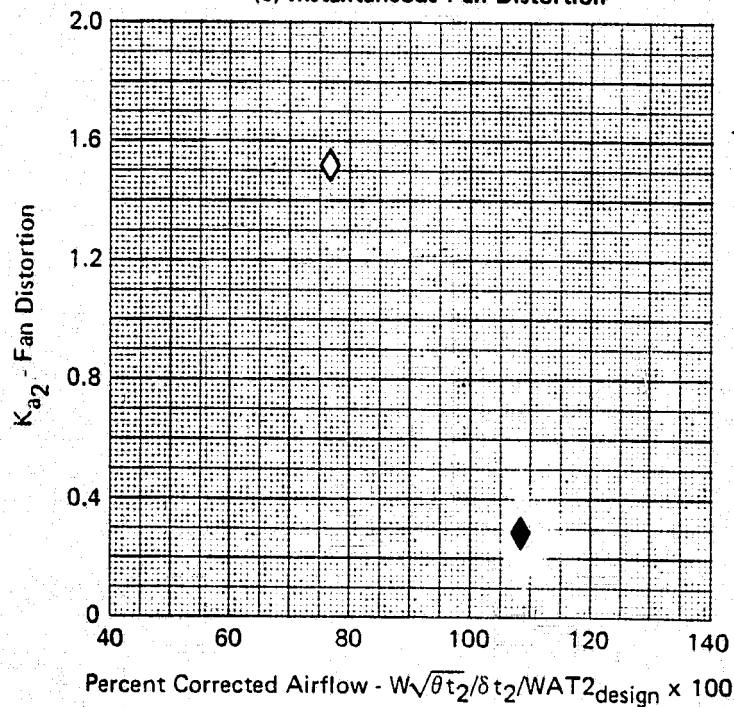
Part/Point - 131/5, Ident 37

RHO DELTA3 BYPASS CIVV
7.0 10.6 0.0 -5.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion



Sym	Hz
○	275
□	615
◇	1040
△	3070

GP77-0658-3

FIGURE G-37 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, $WAT2 = 107.9\%$

SERIES VII - NASA Data Study
 Part/Point - 131/5, Ident 37
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -5.00

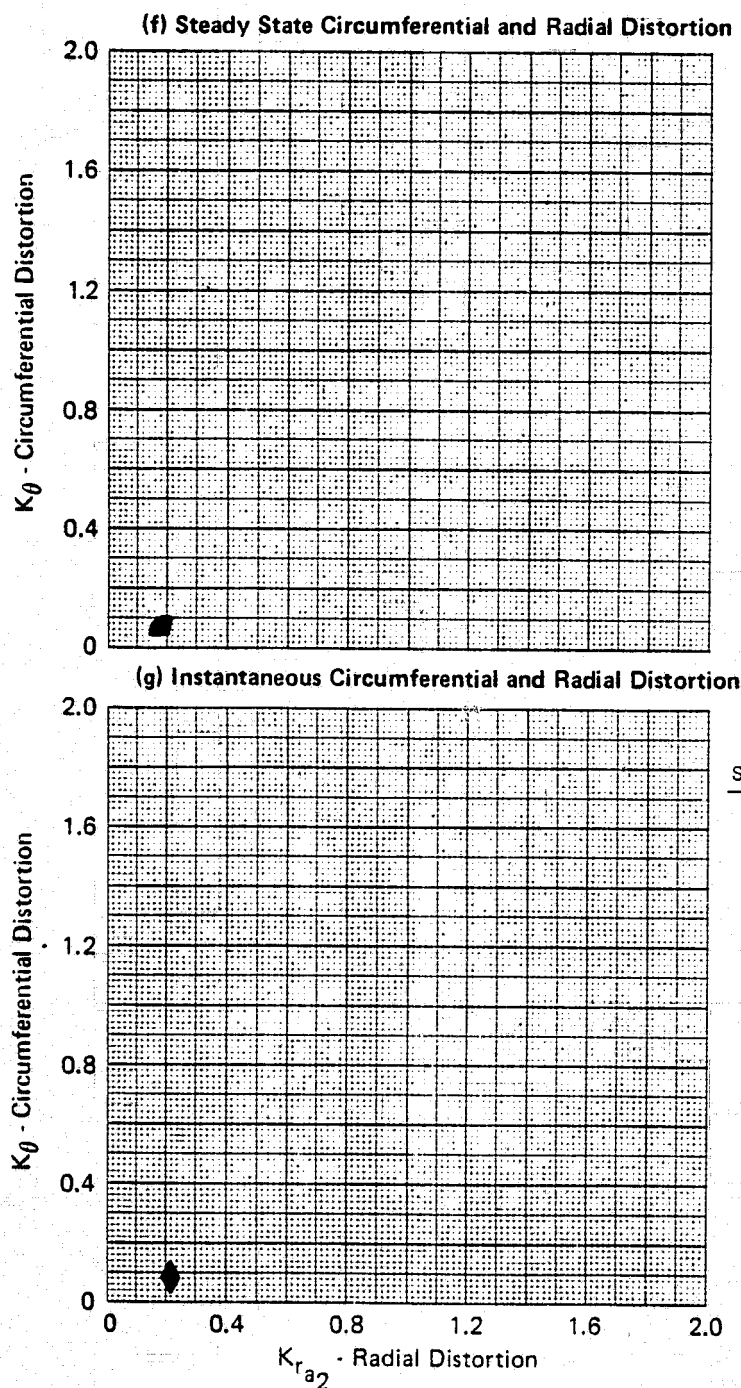
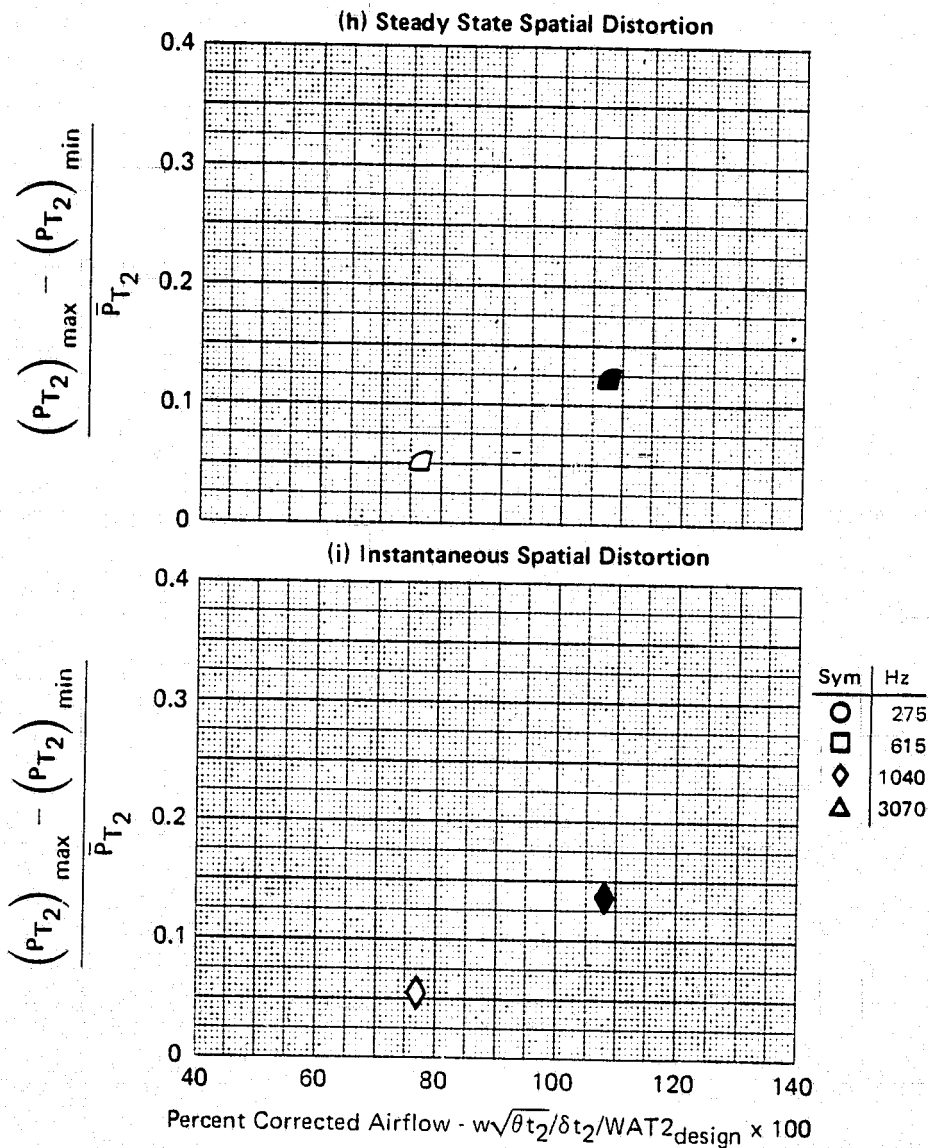


FIGURE G-37 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, WAT2 = 107.9 %

GP77-0658-2

SERIES VII - NASA Data Study
 Part/Point - 131/5, Ident 37
 RHO DELTA3 BYPASS CIVV
 7.0 10.6 0.0 -5.00



GP77-0658-4

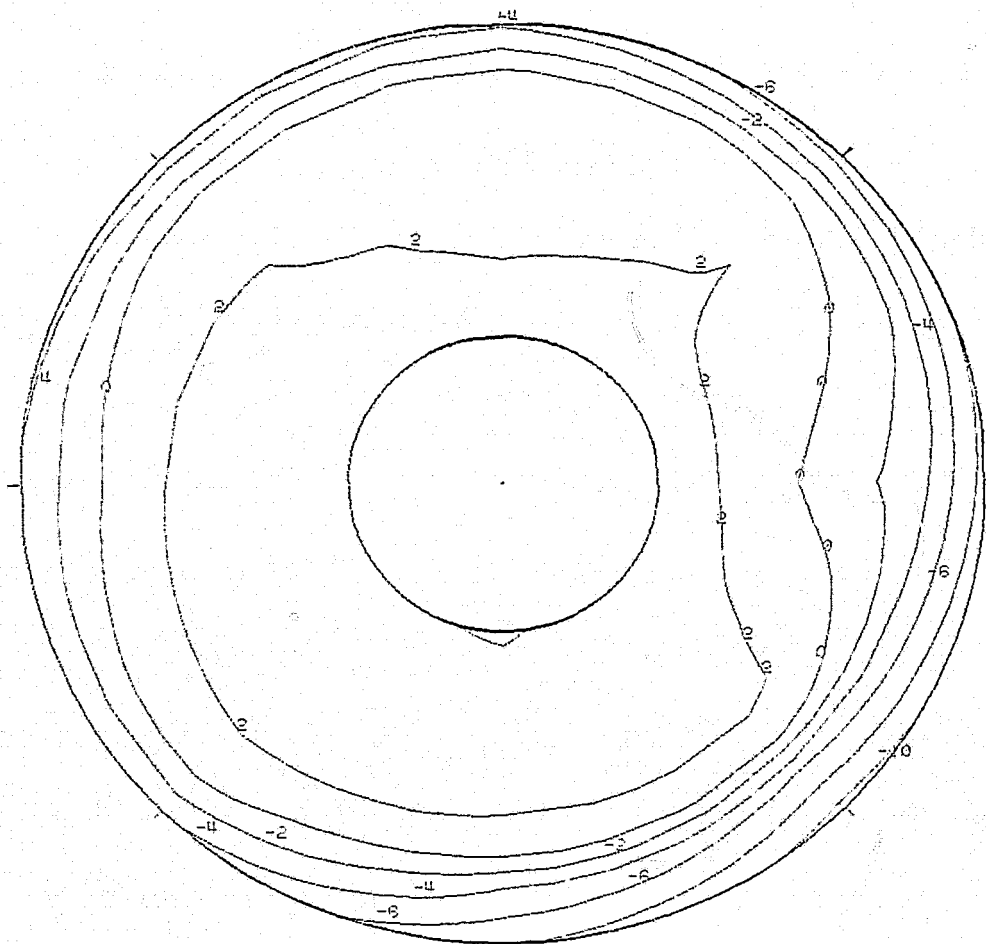
FIGURE G-37 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, $WAT2 = 107.9\%$

SERIES VII - NASA DATA STUDY

DATA PART/POINT 131 / 5 IDENT. **37**
 THE SEGMENT START TIME WAS AT 2:12:16.141

MACH 1.2	ALPHA 10	BETA 0	BW 7.0	DELTA3 10.6	BYPASS 0.0	WAT2 107.9%	CIVV -5.0
P1 62.47 (9.060)	P1/P3 1.000	KTHETA 0.035	KPC1 0.100	BKPC2 0.100	KPC 0.252	KPC2 0.032	KSP 0.025
							D2 0.119

37 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 62.47 kPa (9.060 PSIA)
 NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
 FROM MEAN FACE PRESSURE.

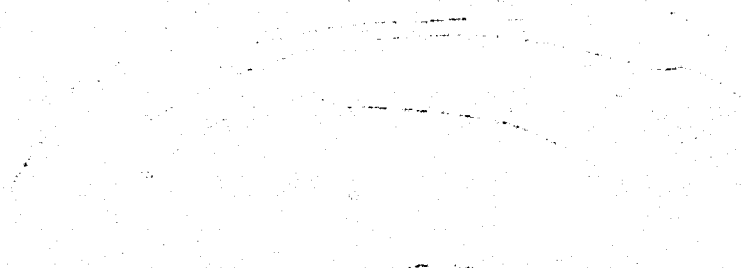
FIGURE G-37 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, WAT2 = 107.9%

INLET DISTORTION ANALYSIS STUDY

37

NOTE: 107.9%

37(k) Turbulence Contour 1040 Hz



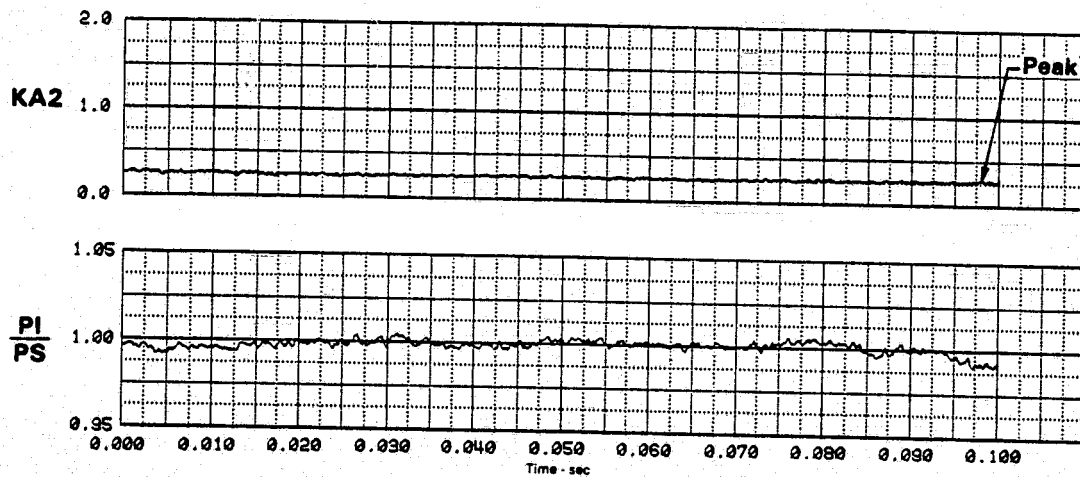
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00684
FIGURE G-37 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, WAT2 = 107.9 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 131 / 5 IDENT. 37
THE SEGMENT START TIME WAS AT 3:12:16.141

MACH 1.2	ALPHA 10	BETA 0	RHO 7.0	DELTA3 10.6	BYPASS 0.0	WAT2 107.9%	CIVV -5.0
PI 62.03 (8.996)	PI/PS 0.993	KTHETA 0.995	KRA2 0.217	BKRA2 0.202	KA2 0.236	KC2 0.041	KOSP 0.046
							D2 0.136

37(I) Time History Plots 1040 Hz



PEAK AT TIME = 0.098010 SECONDS

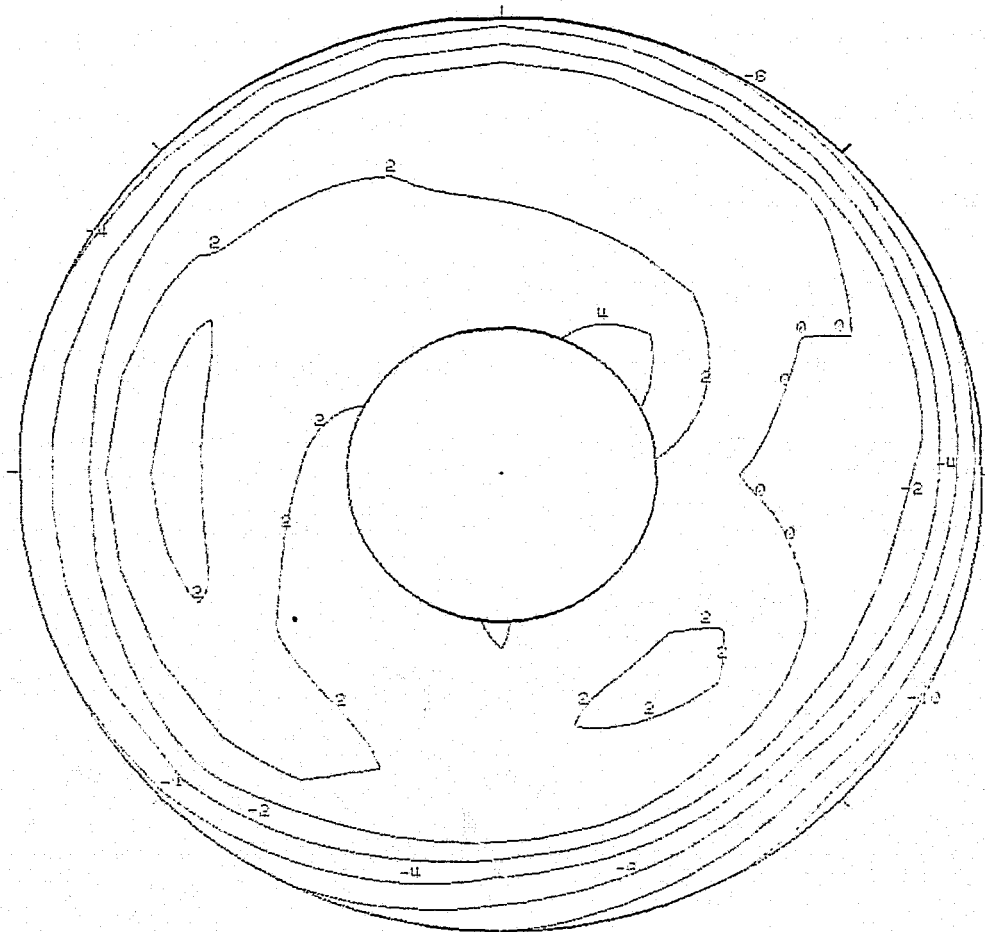
FIGURE G-37 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, WAT2 = 107.9 %

SERIES VII - NASA DATA STUDY

DATA PART/POINT 131 / 5 IDENT. 37
THE SEGMENT START TIME WAS AT 3:12:16.141

MACH 1.2	ALPHA 10	BETA 0	BHO 7.9	DELTA2 10.6	BYPASS 0.0	WAT2 107.9%	CIVV -5.0
PI 62.03 (8.996)	PI/PS 0.933	KTHETA 0.935	KPA2 0.217	SKPA2 3.232	KP2 0.236	KC2 0.941	KOSP 0.946
							D2 0.126

**37(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
1040 Hz**



MEAN FACE PRESSURE = 62.03 kPa (8.996 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.098010 SECONDS

FIGURE G-37 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 10.0$, $\beta = 0.0$, $WAT2 = 107.9\%$

FLIGHT - NASA Data Study
 Part/Point - 424/12, Ident 38
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00

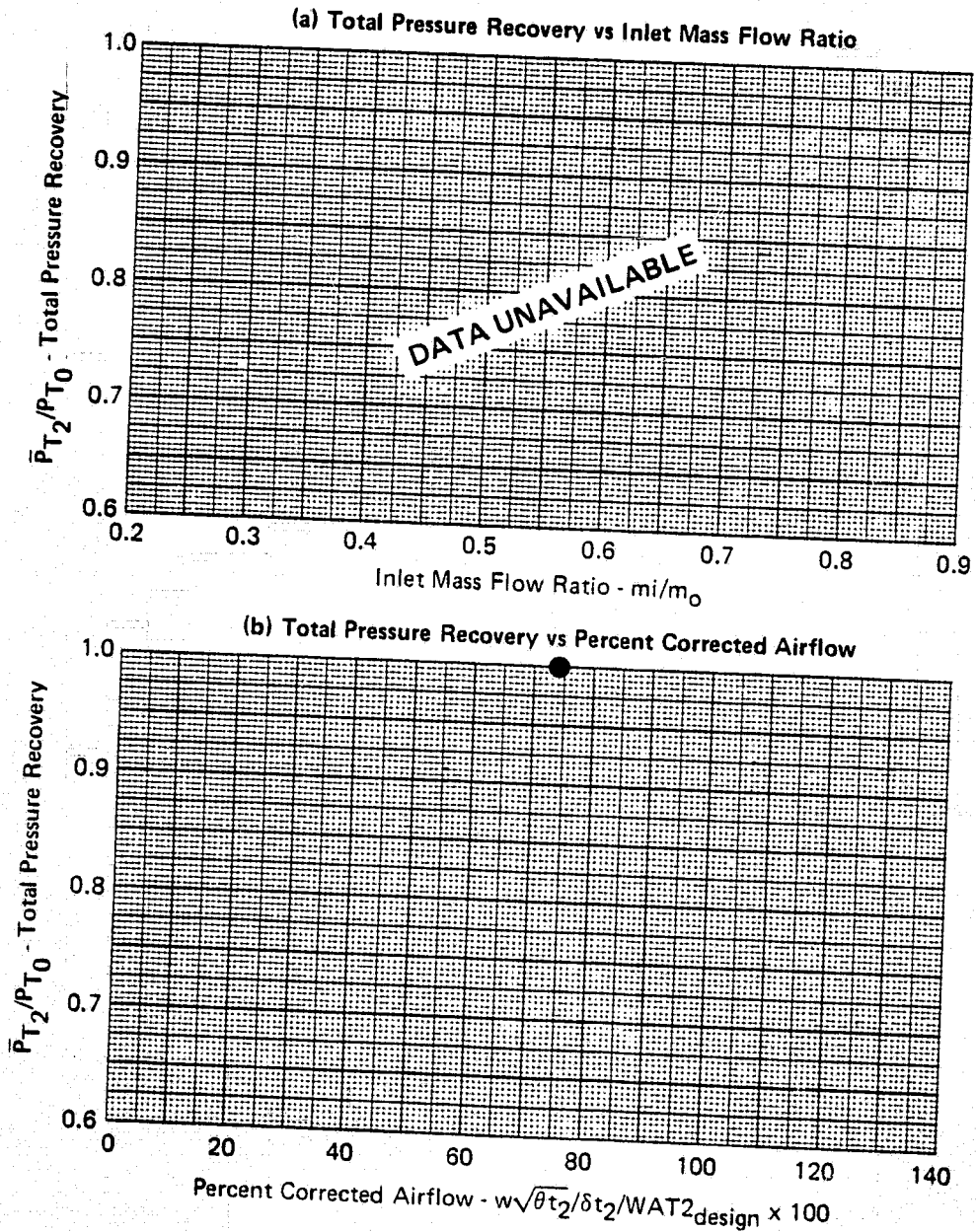
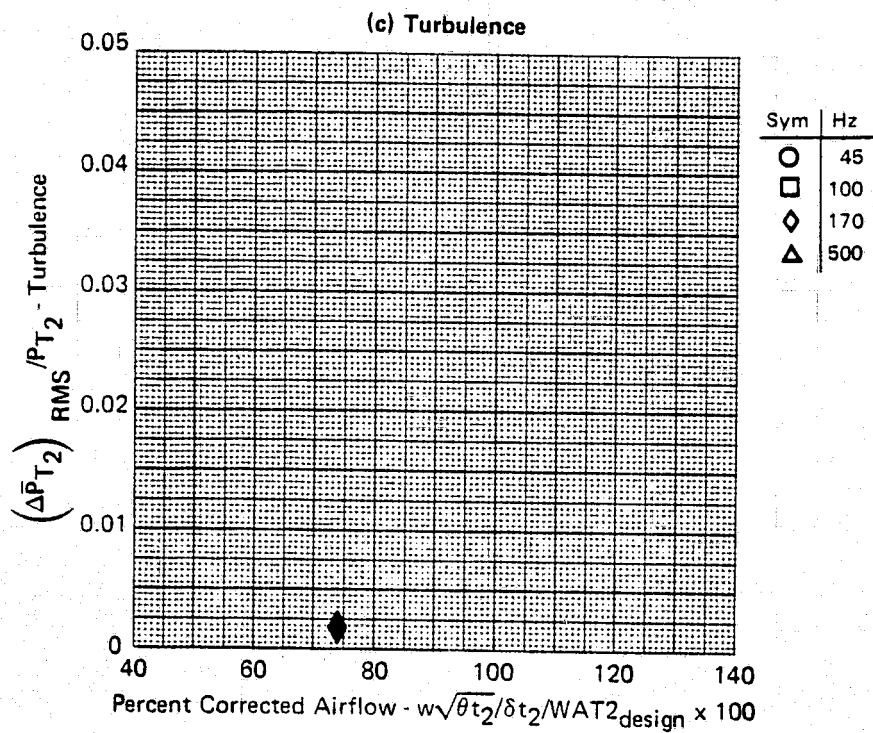


FIGURE G-38
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.18$, $\alpha = 7.7$, $\beta = 0.3$, $WAT2 = 74.0\%$

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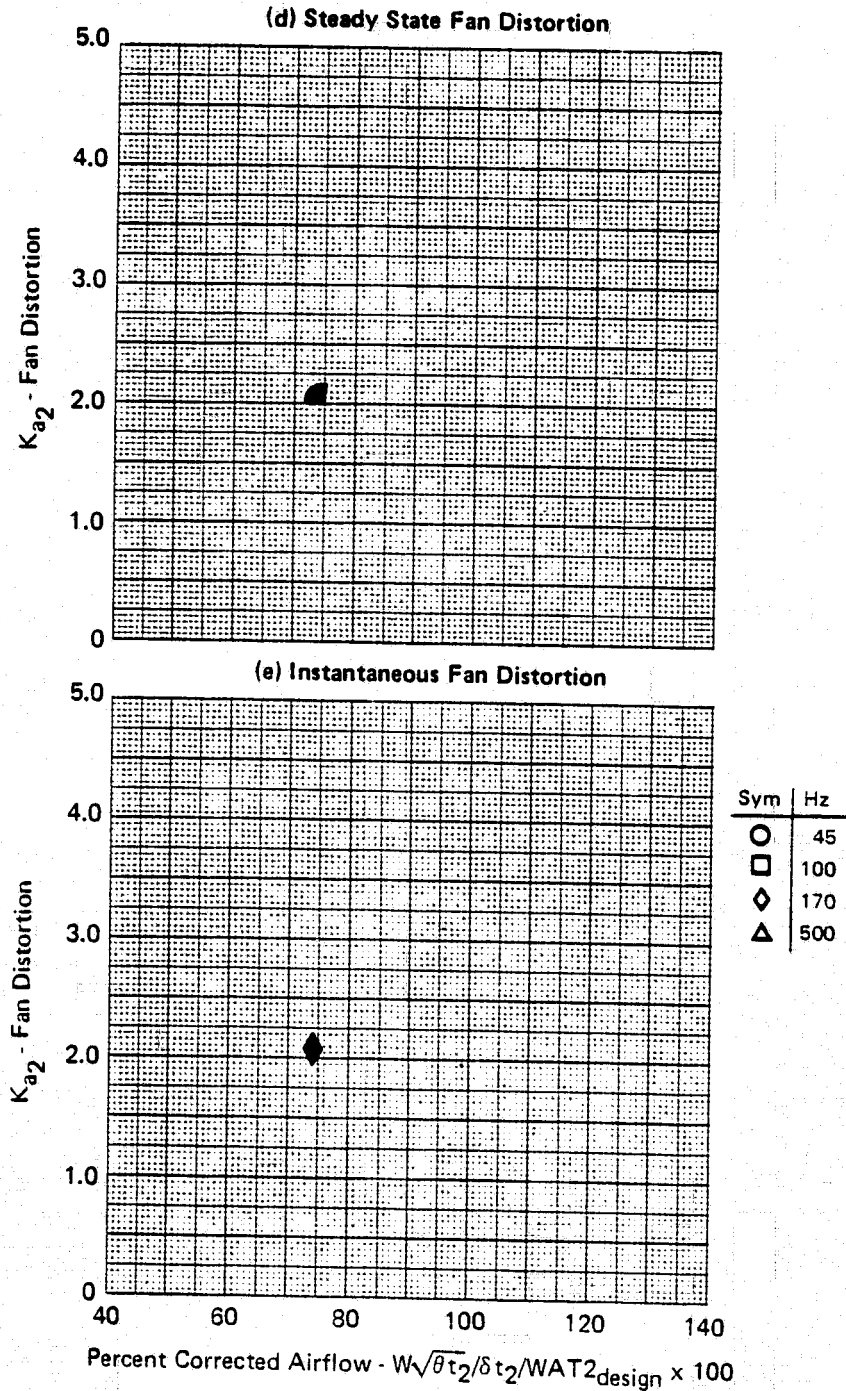
FLIGHT - NASA Data Study
 Part/Point - 424/12, Ident 38
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00



GP77-0658-5

FIGURE G-38 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.18, \alpha = 7.7, \beta = 0.3, WAT2 = 74.0 \%$

FLIGHT - NASA Data Study
 Part/Point - 424/12, Ident 38
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00



GP77-0658-3

FIGURE G-38 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.18$, $\alpha = 7.7$, $\beta = 0.3$, $WAT2 = 74.0\%$

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FLIGHT - NASA Data Study
 Part/Point - 424/12, Ident 38
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00

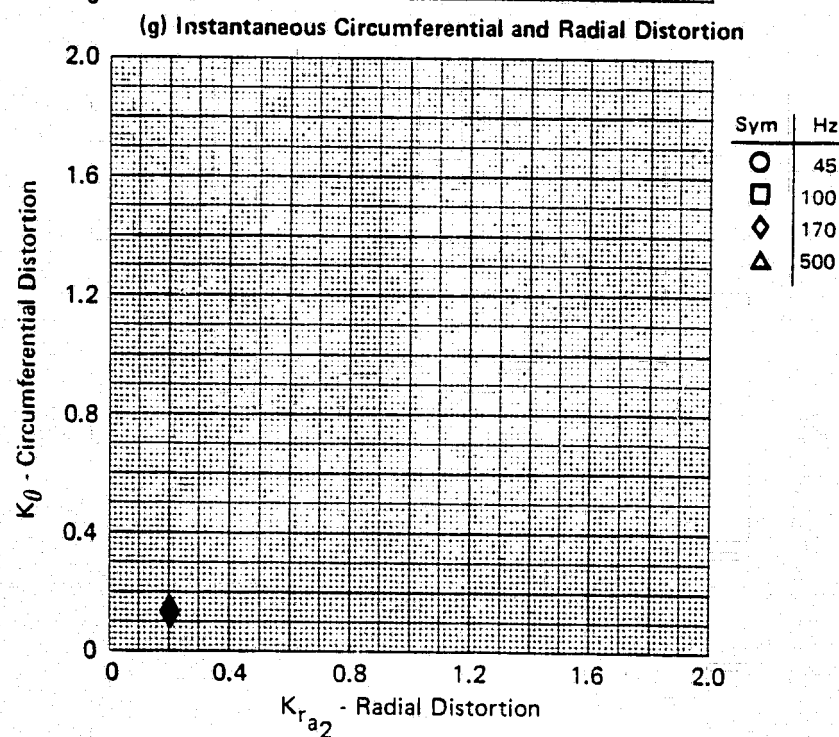
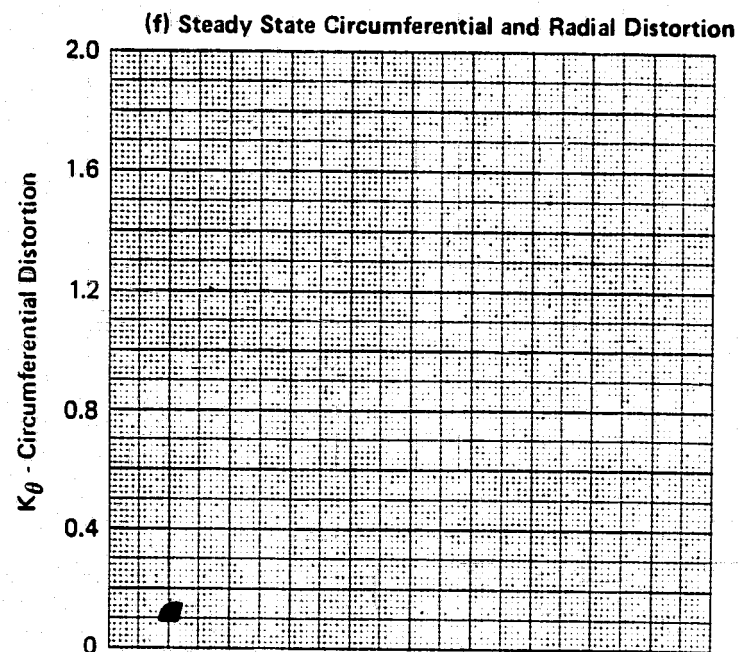


FIGURE G-38 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.18$, $\alpha = 7.7$, $\beta = 0.3$, WAT2 = 74.0 %

GP77-0658-2

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FLIGHT - NASA Data Study
 Part/Point - 424/12, Ident 38
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -25.00

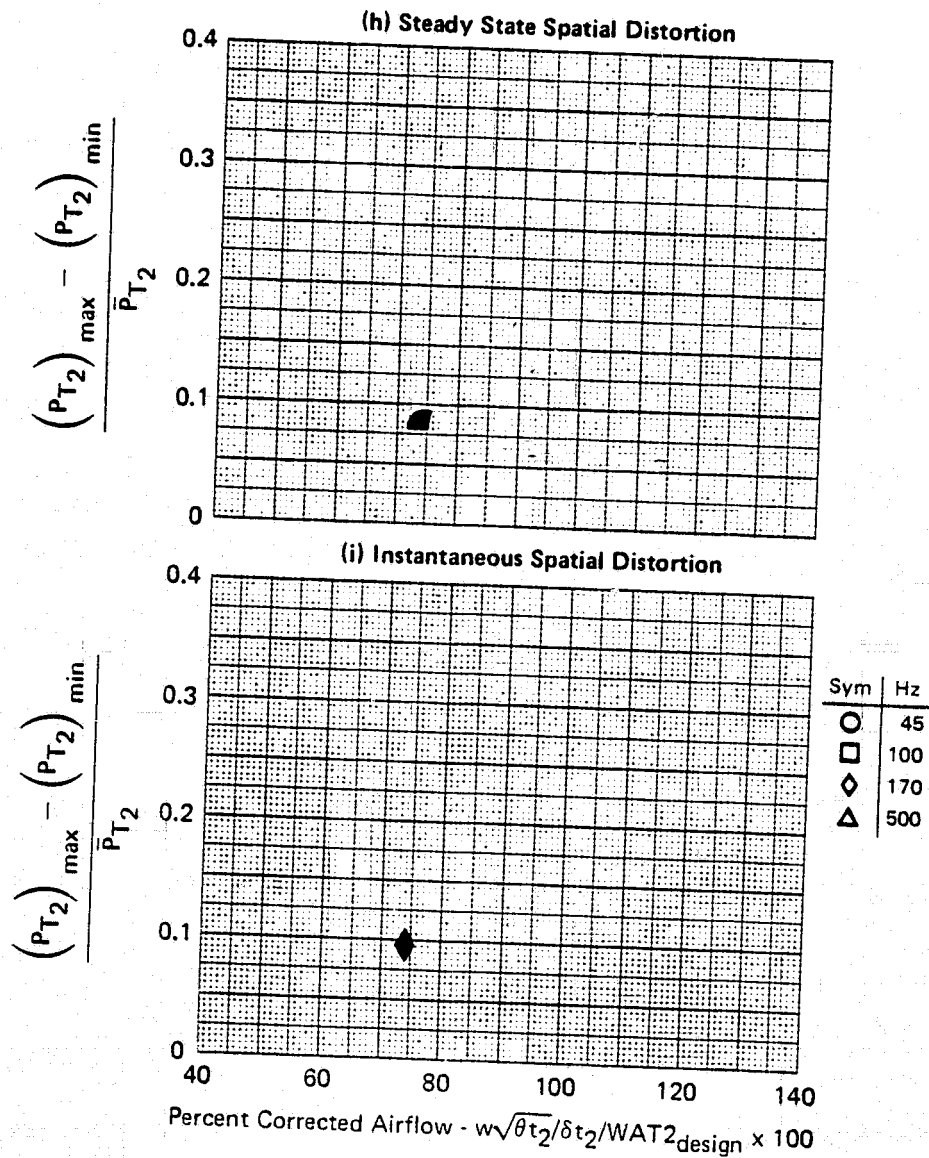


FIGURE G-38 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.18$, $\alpha = 7.7$, $\beta = 0.3$, $WAT2 = 74.0\%$

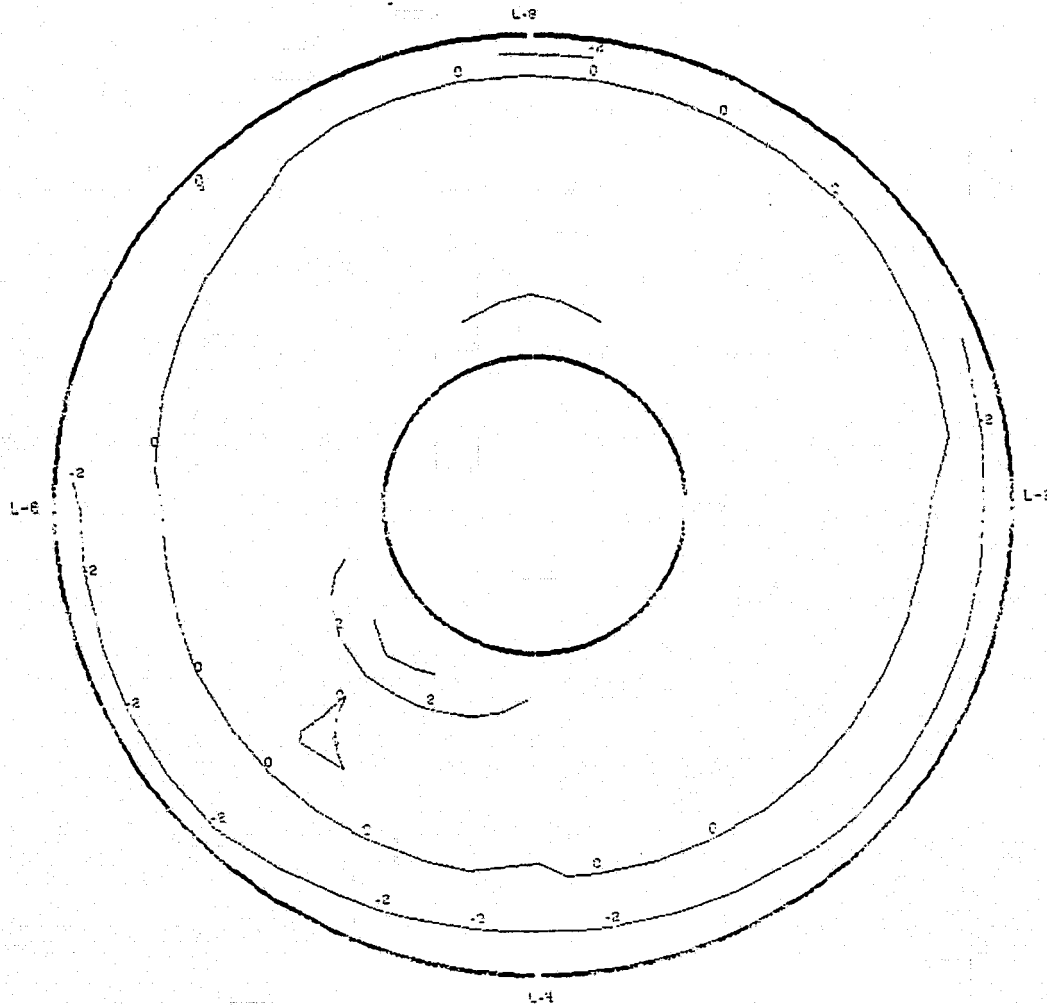
GP77-0658-4

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/12 IDENT. 38
THE SEGMENT START TIME WAS AT 04:12:40.132

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.18	7.7	0.3	8996(29513)	7.0	11.0	0.0	74.0%	-25.00
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	K0SP	D2
72.80(10.558)	1.0	.1086	.2050	2.050	2.1023	0.0792	—	0.0858

38 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 72.80 kPa (10.558 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

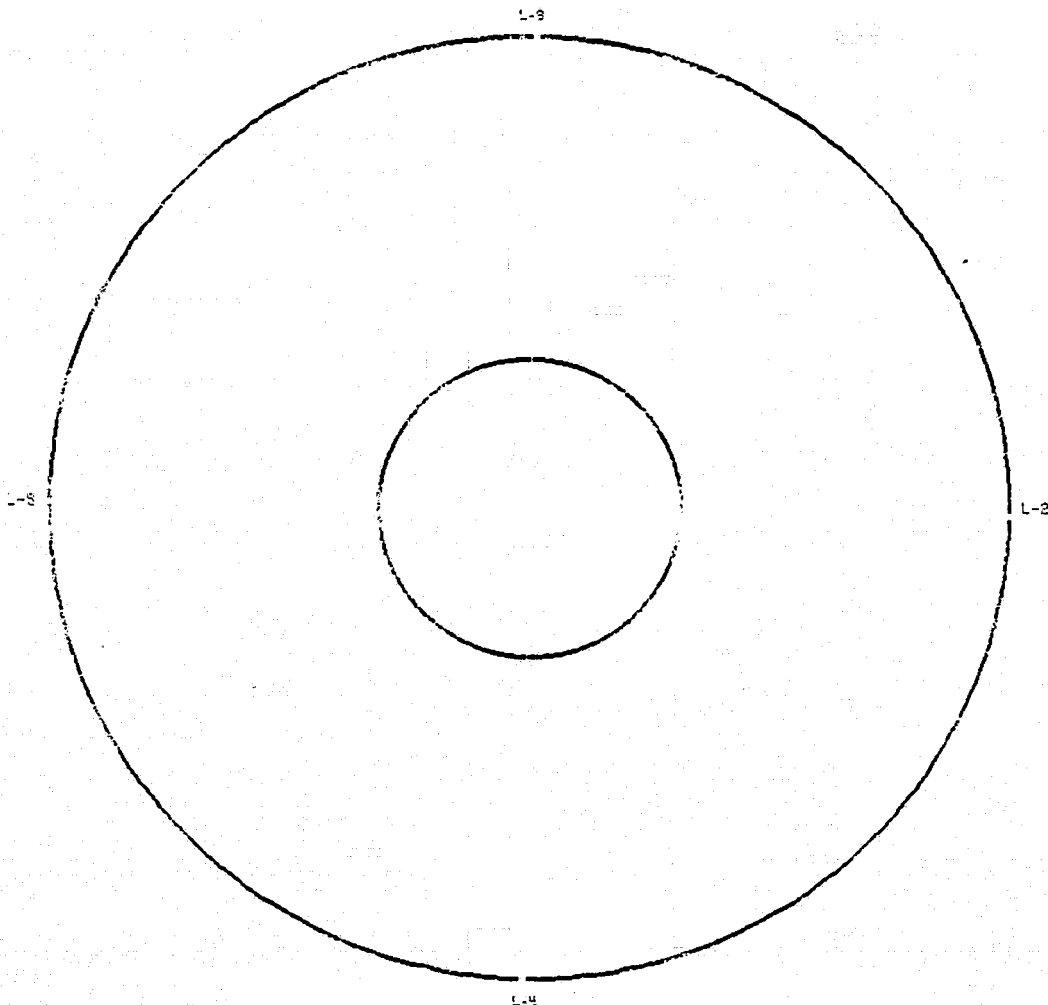
FIGURE G-38 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.18$, $\alpha = 7.7$, $\beta = 0.3$, WAT2 = 74.0 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/12 IDENT. 38
THE SEGMENT START TIME WAS AT 04:12:40.132

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.18	7.7	0.3	8996(29513)	7.0	11.0	0.0	74.0%	-25.00

38(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0016

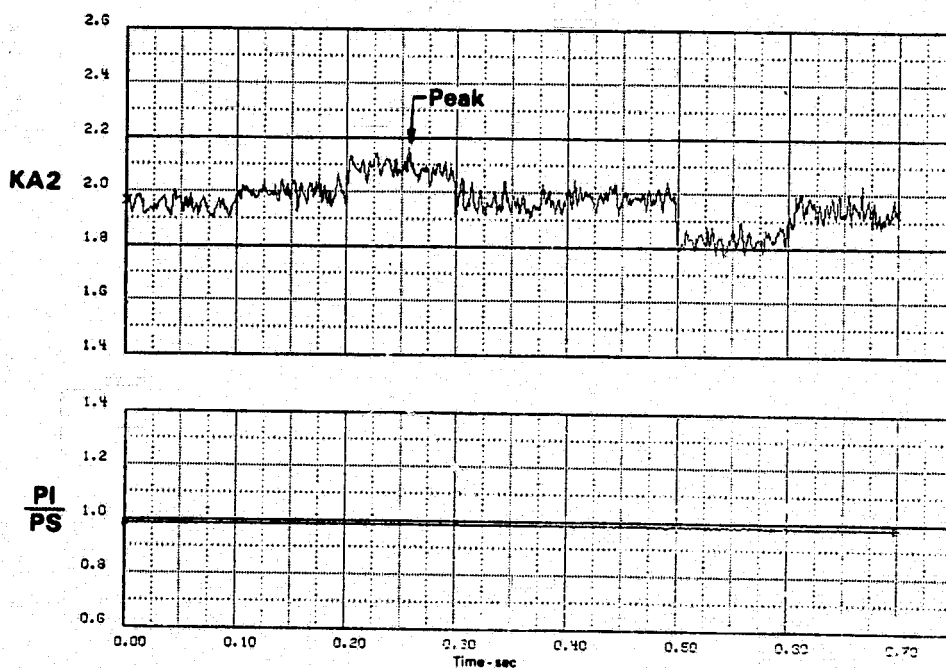
FIGURE G-38 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.18$, $\alpha = 7.7$, $\beta = 0.3$, WAT2 = 74.0 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/12 IDENT. 38
THE SEGMENT START TIME WAS AT 04:12:40.132

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.18	7.7	0.3	8999(29525)	7.0	11.0	0.0	74.0%	-25.00
P	PI/PS	KTHETA	KRA2	SKRA2	KA2	KC2	KESP	D2
71.87(10.38)	.9831	.1374	.2021	2.0208	2.1583	.1070	.1381	.0963

38(I) Time History Plots
170 Hz



PEAK AT TIME = 0.2566 SECONDS

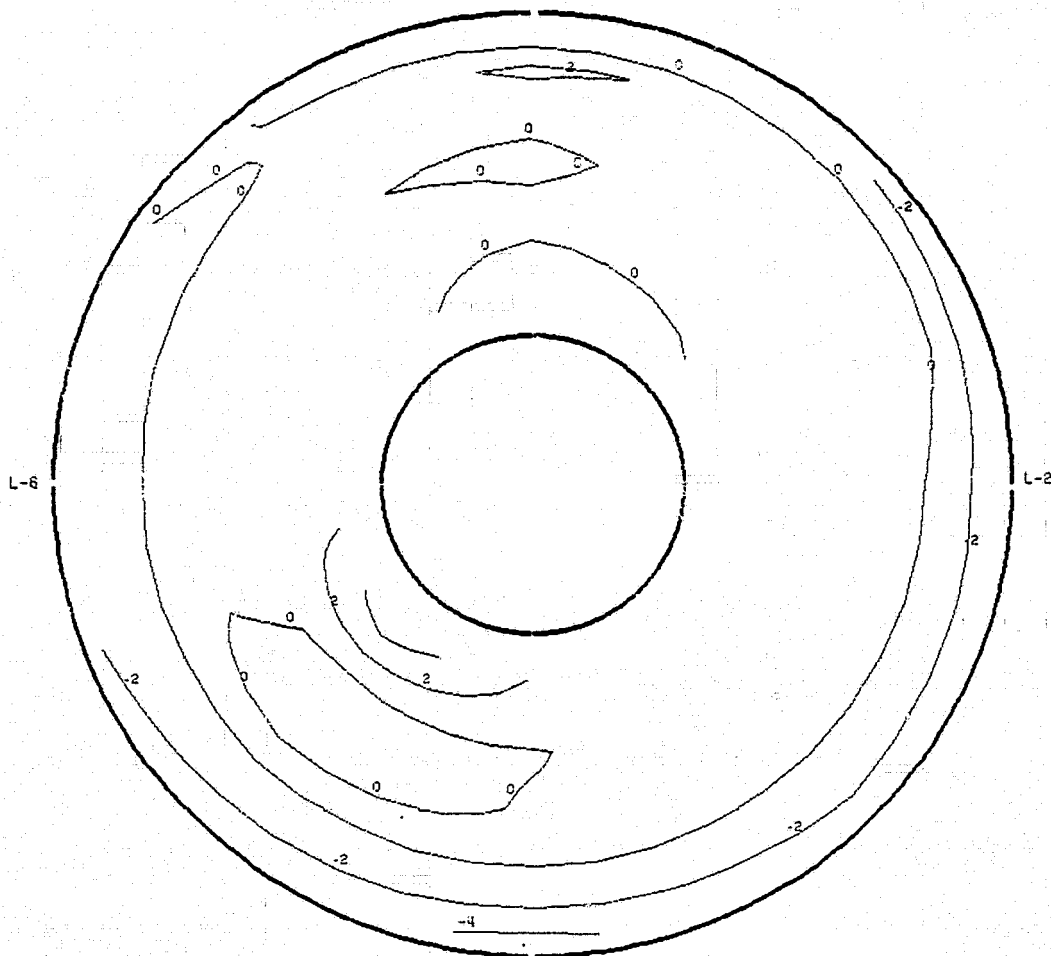
FIGURE G-38 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.18$, $\alpha = 7.7$, $\beta = 0.3$, WAT2 = 74.0 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/12 IDENT. 38
THE SEGMENT START TIME WAS AT 04:12:40.132

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.18	7.7	0.3	8999(29525)	7.0	11.0	0.0	74.0%	-25.00
PI	PI/PS	KTHETA	KRA2	SKRA2	KA2	KC2	KOSP	D2
71.57(10.38)	.9831	.1374	.2021	2.0208	2.1583	.1070	.1381	.0963

38(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



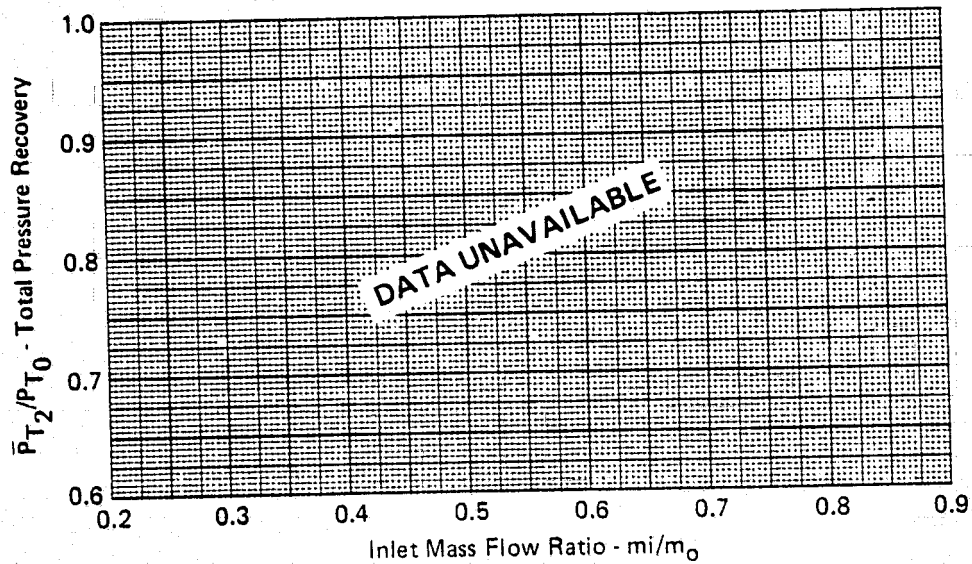
MEAN FACE PRESSURE = 71.57 kPa (10.38 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.2566 SECONDS

FIGURE G-38 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.18$, $\alpha = 7.7$, $\beta = 0.3$, WAT2 = 74.0 %

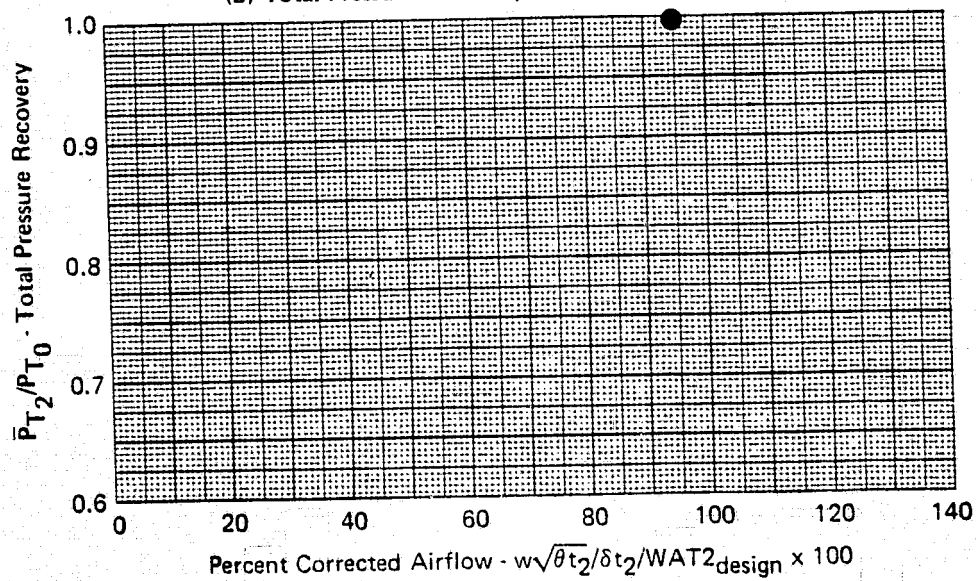
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FLIGHT - NASA Data Study
 Part/Point - 424/13, Ident 39
 RHO DELTA3 BYPASS CIVV
 7.1 11.1 0.0 -15.46

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



(b) Total Pressure Recovery vs Percent Corrected Airflow

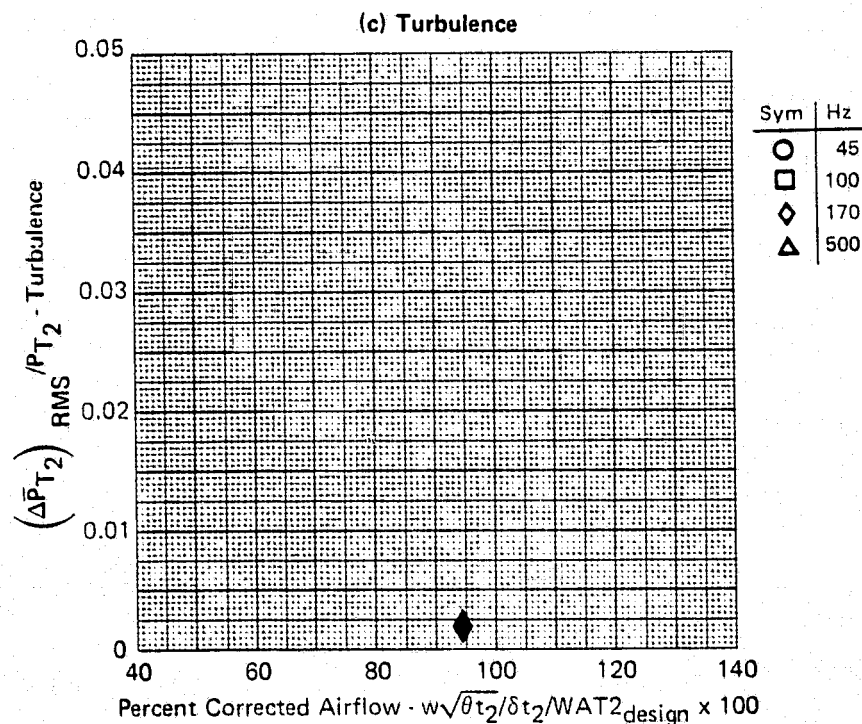


GP77-0658-1

FIGURE G-39
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.2$, $\alpha = 7.4$, $\beta = -1$, $WAT2 = 94.4\%$

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FLIGHT - NASA Data Study
 Part/Point - 424/13, Ident 39
 RHO DELTA3 BYPASS CIVV
 7.1 11.1 0.0 -15.46



GP77-0658-5

FIGURE G-39 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 7.4$, $\beta = -.1$, $WAT2 = 94.4\%$

FLIGHT - NASA Data Study
Part/Point - 424/13, Ident 39

RHO DELTA3 BYPASS CIVV
7.1 11.1 0.0 -15.46

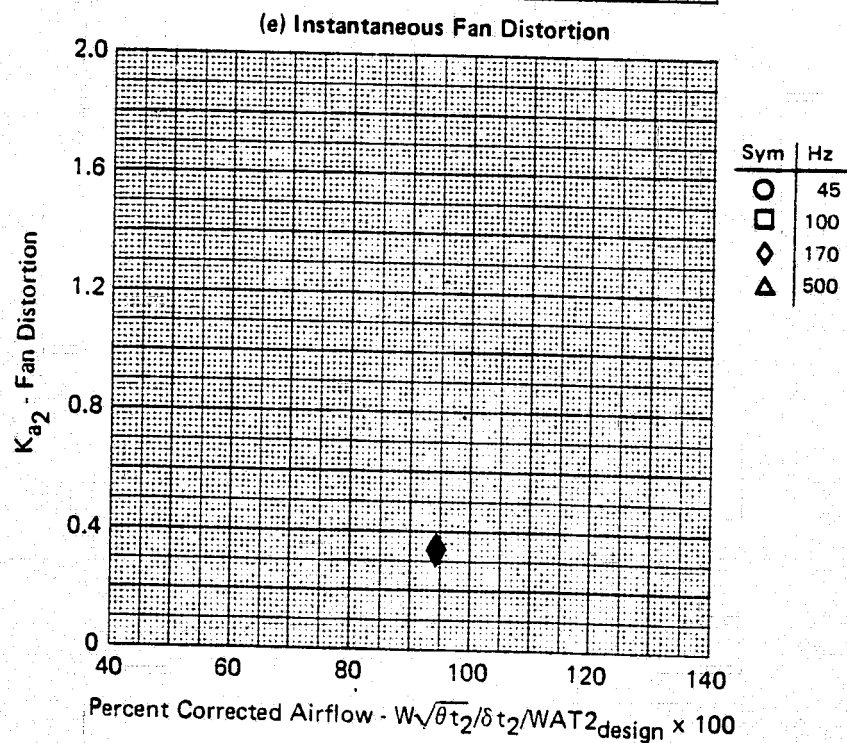
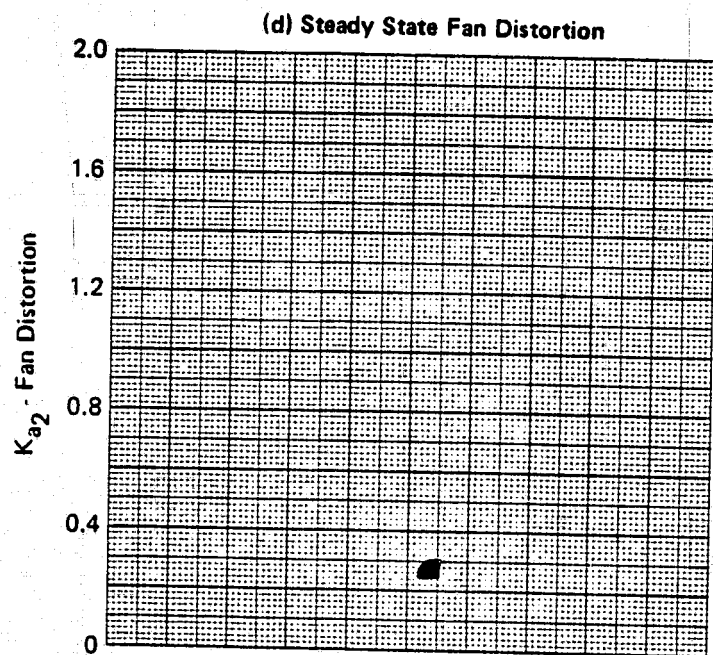


FIGURE G-39 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 7.4$, $\beta = -1$, $WAT2 = 94.4\%$

GP77-0658-3

FLIGHT - NASA Data Study
 Part/Point - 424/13, Ident 39
 RHO DELTA3 BYPASS CIVV
 7.1 11.1 0.0 -15.46

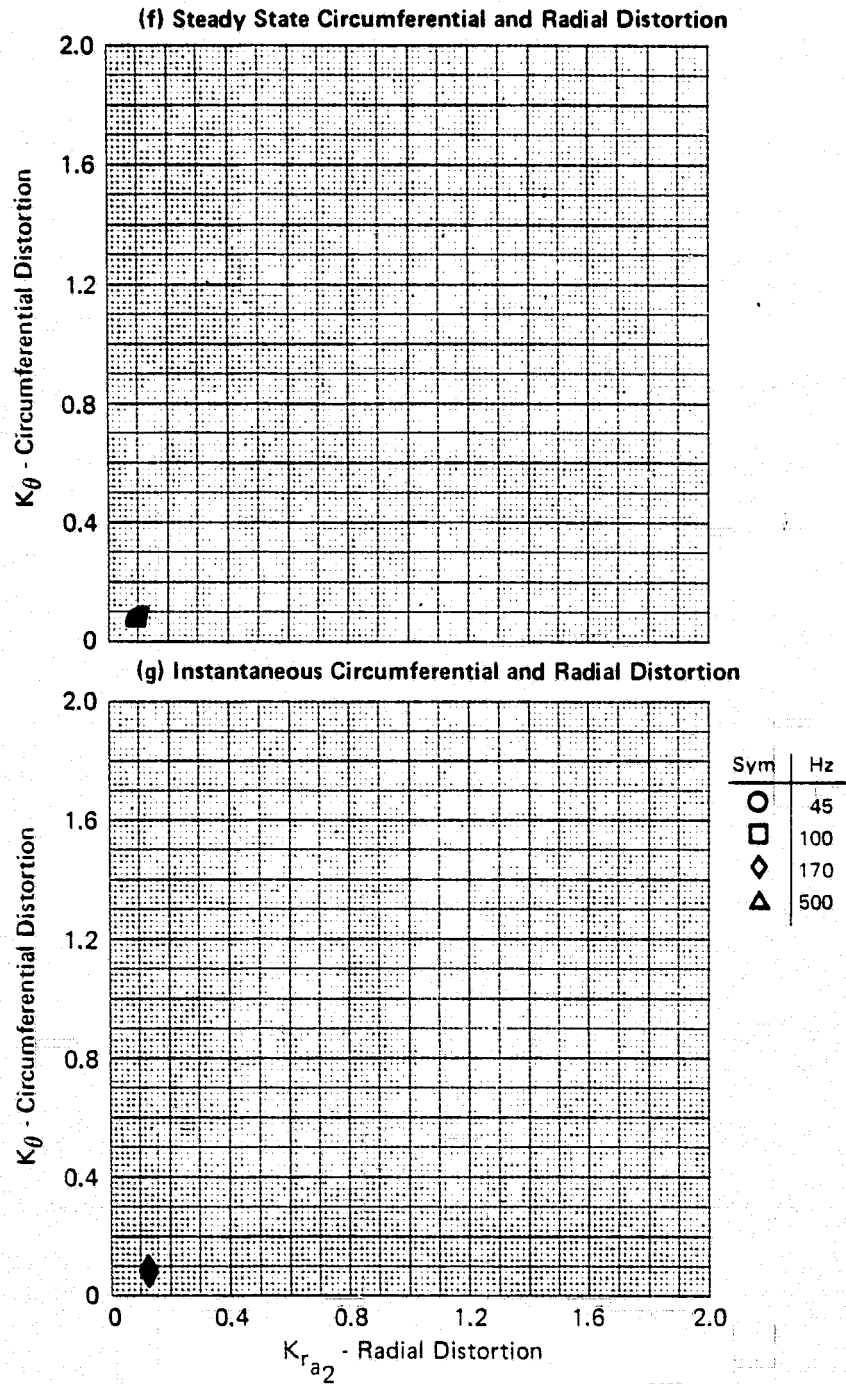


FIGURE G-39 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 7.4$, $\beta = -0.1$, $WAT2 = 94.4\%$

FLIGHT - NASA Data Study
 Part/Point - 424/13, Ident 39
 RHO DELTA3 BYPASS CIVV
 7.1 11.1 0.0 -15.46

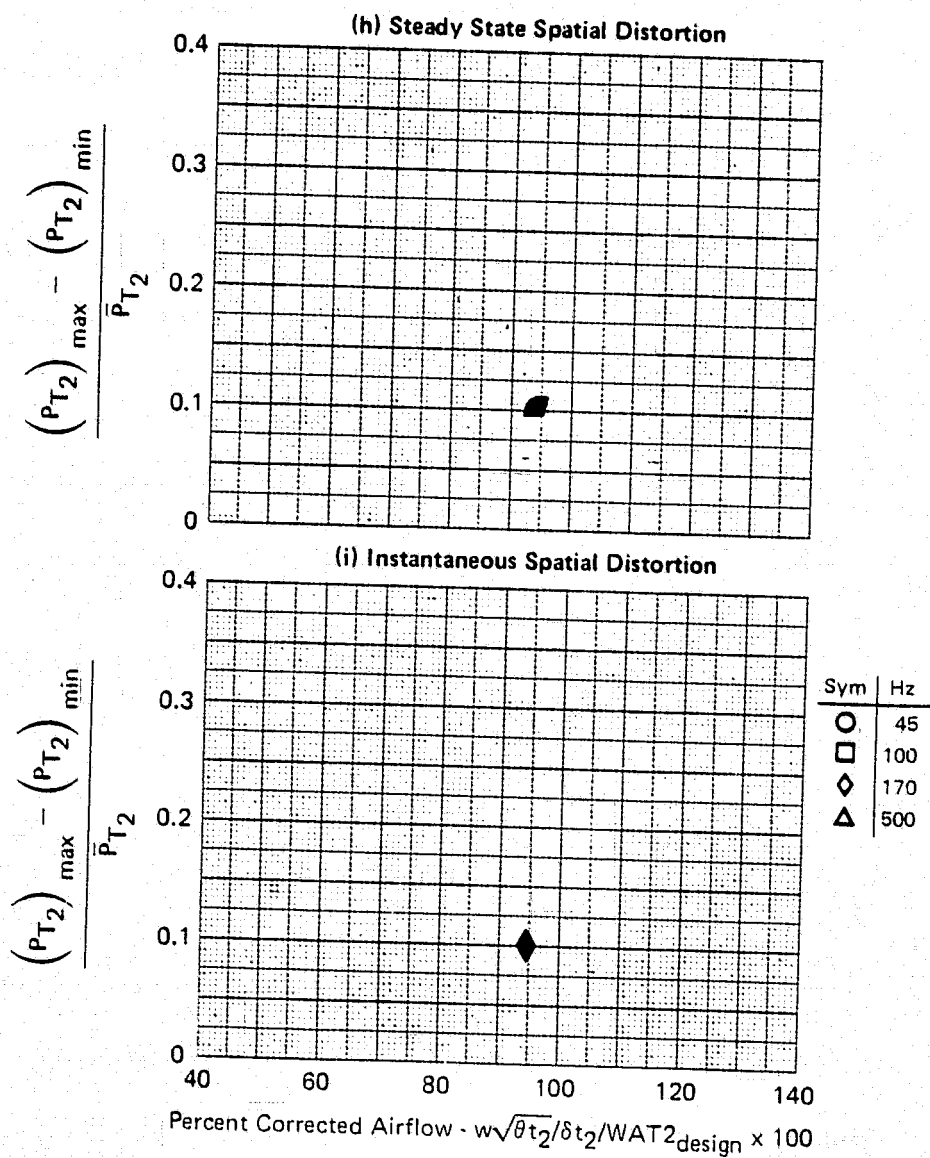


FIGURE G-39 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.2$, $\alpha = 7.4$, $\beta = -0.1$, $WAT2 = 94.4\%$

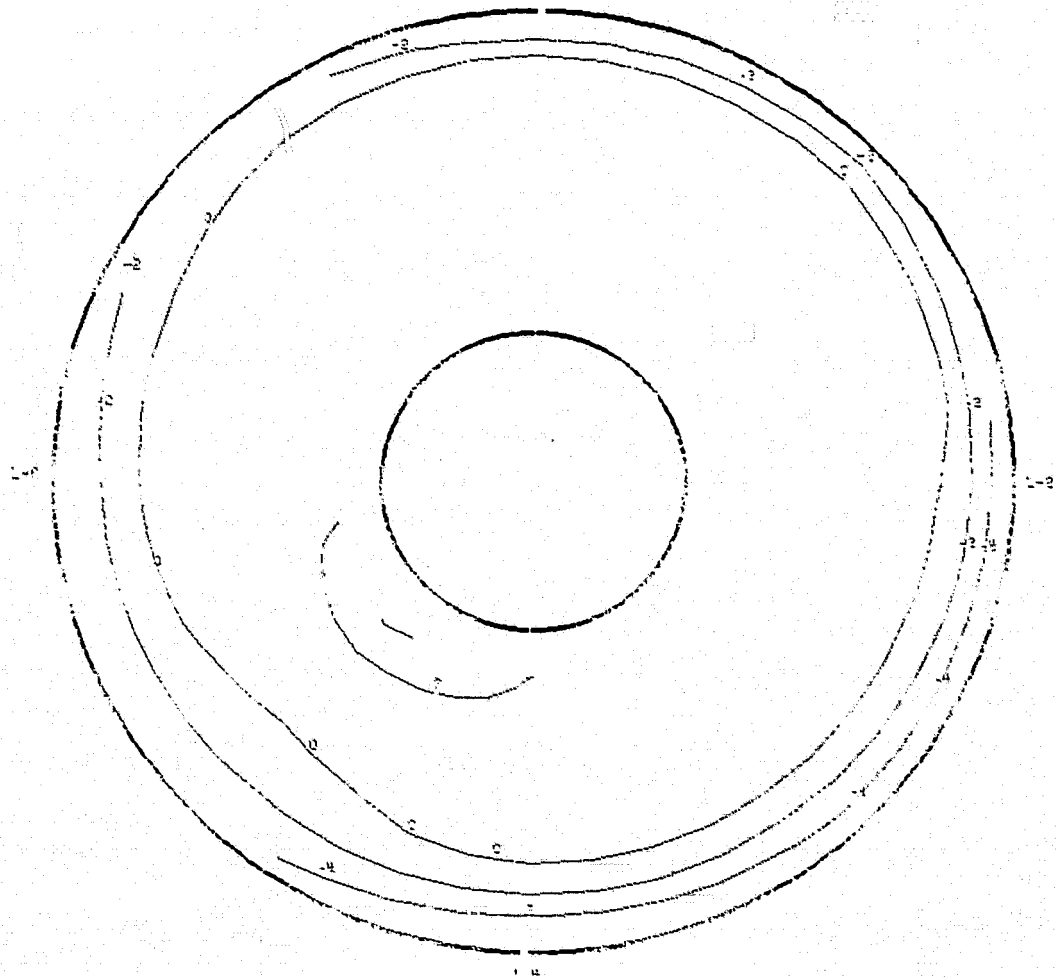
GP77-0658-4

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/13 IDENT. 39
THE SEGMENT START TIME WAS AT 04:13:05.376

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.2	7.4	-0.1	8812(28912)	7.1	11.1	0.0	94.4%	-15.46
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
76.06(11.031)	1.0	.0675	.1040	.2135	.2765	.0360	—	.1035

39 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 76.06 kPa (11.031 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

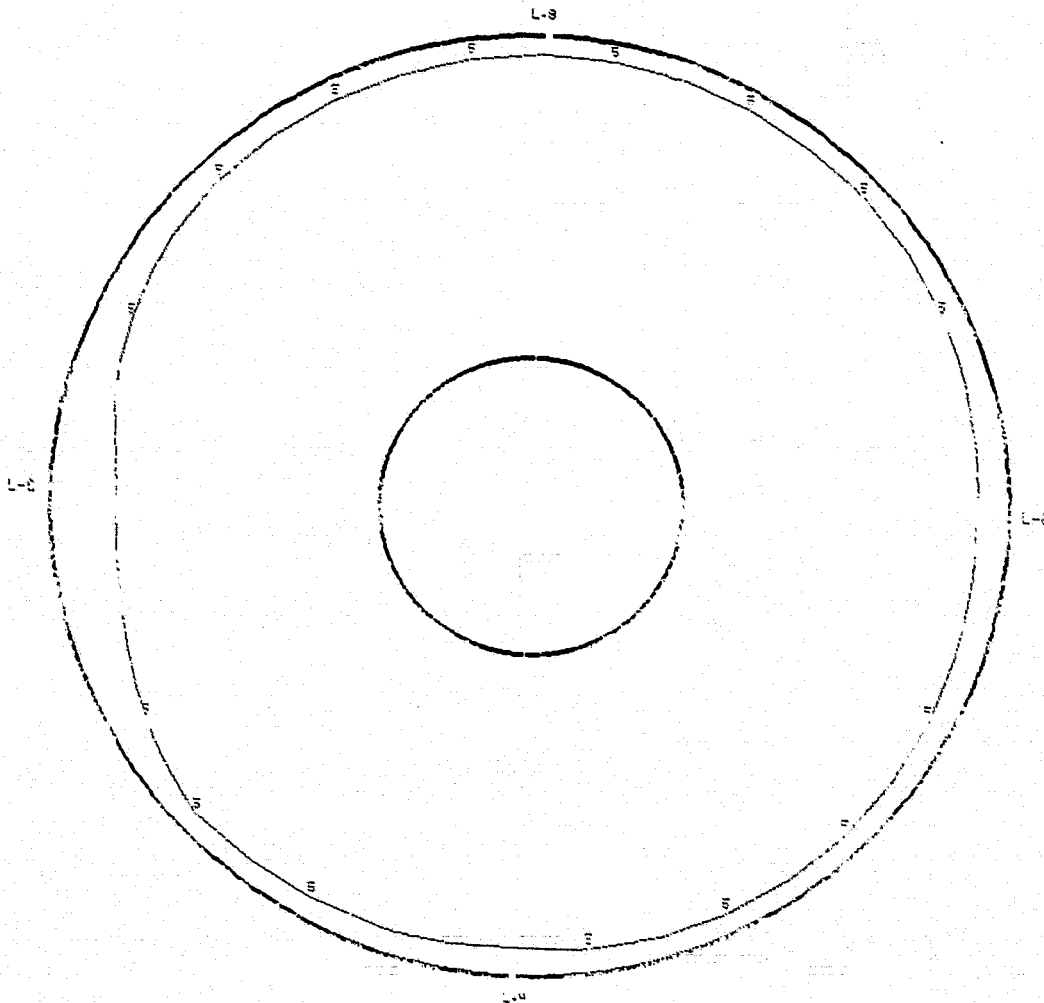
FIGURE G-39 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.2$, $\alpha = 7.4$, $\beta = -0.1$, WAT2 = 94.4 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/13 IDENT. 39
THE SEGMENT START TIME WAS AT 04:13:05.376

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.2	7.4	-0.1	8812(28912)	7.1	11.1	0.0	94.4%	-15.46

39(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0020

FIGURE G-39 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

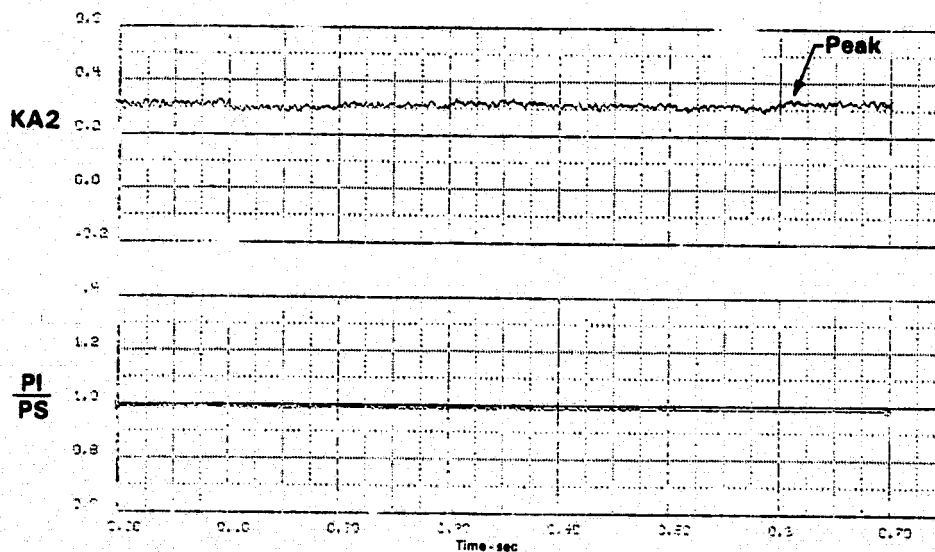
$M_0 = 1.2$, $\alpha = 7.4$, $\beta = -0.1$, WAT2 = 94.4 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/13 IDENT. 39
THE SEGMENT START TIME WAS AT 04:13:05.376

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.2	7.4	-0.1	8809(28900)	7.1	11.1	0.0	94.4%	-18.46
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
75.08(10.68)	.9872	.0849	.1240	.2546	.3395	.0670	.0607	.1011

39(I) Time History Plots
170 Hz



PEAK AT TIME = 0.61011 SECONDS

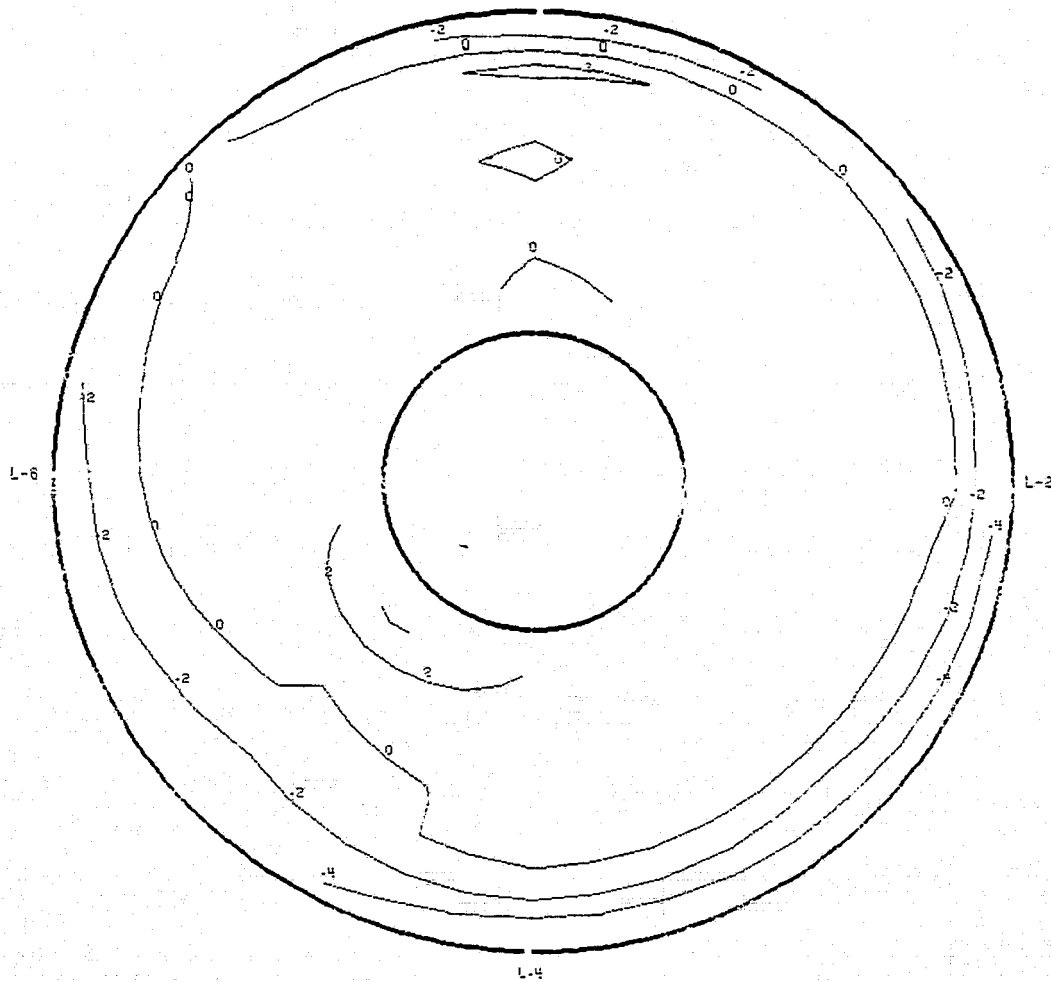
FIGURE G-39 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 7.4$, $\beta = -0.1$, WAT2 = 94.4 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/13 IDENT. 39
THE SEGMENT START TIME WAS AT 04:13:05.376

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.2	7.4	-0.1	8809(28900)	7.1	11.1	0.0	94.4%	-15.46
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	K0SP	D2
75.08(10.89)	.9872	.0849	.1240	.2546	.3396	.0670	.0607	.1011

39(m) Instantaneous Total Pressure Contour at Peak Instantaneous Ka_2
170 Hz



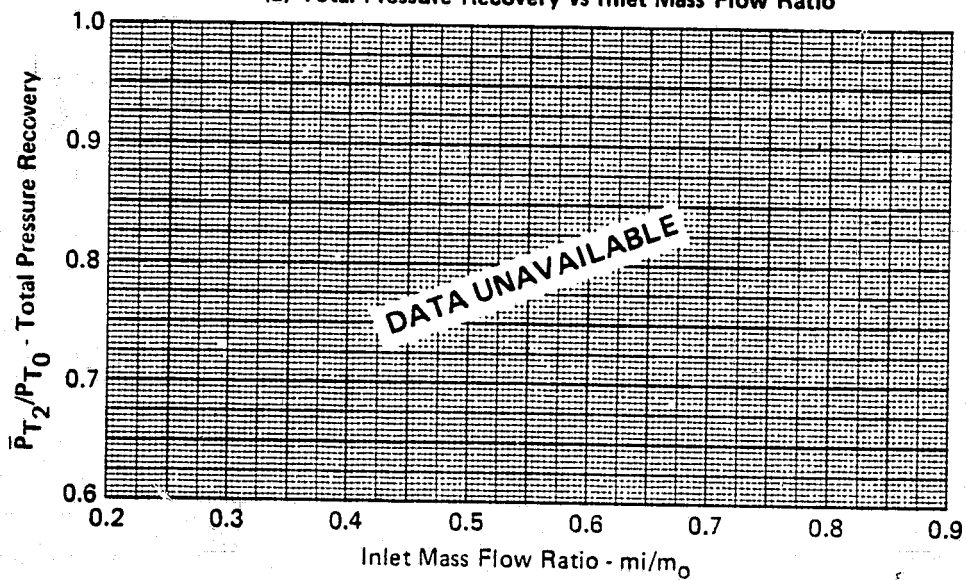
MEAN FACE PRESSURE = 75.08 kPa (10.890 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.61011 SECONDS

FIGURE G-39 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.2$, $\alpha = 7.4$, $\beta = -0.1$, $WAT2 = 94.4\%$

FLIGHT - NASA Data Study
Part/Point - 421/17, Ident 40

RHO	DELTA3	BYPASS	CIVV
7.0	11.0	0.0	-5.00

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



(b) Total Pressure Recovery vs Percent Corrected Airflow

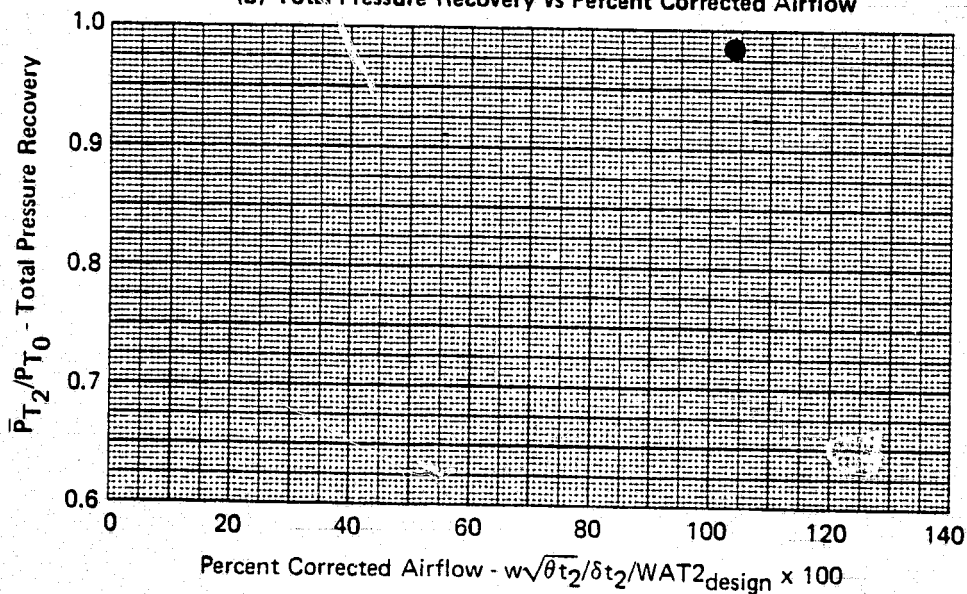
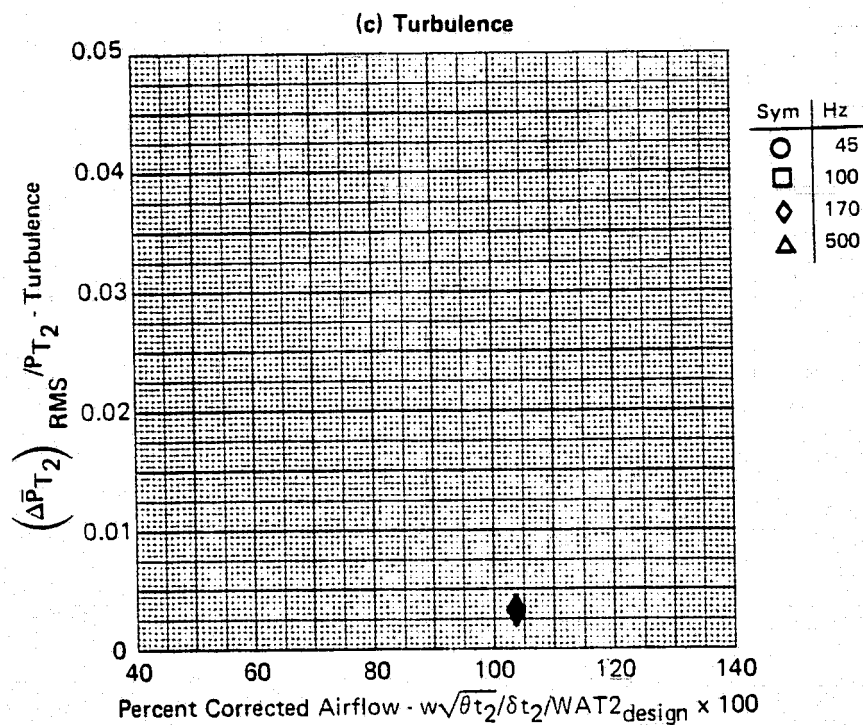


FIGURE G-40
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.17, \alpha = 10.6, \beta = 0.0, WAT2 = 103.4 \%$

GP77-0858-1

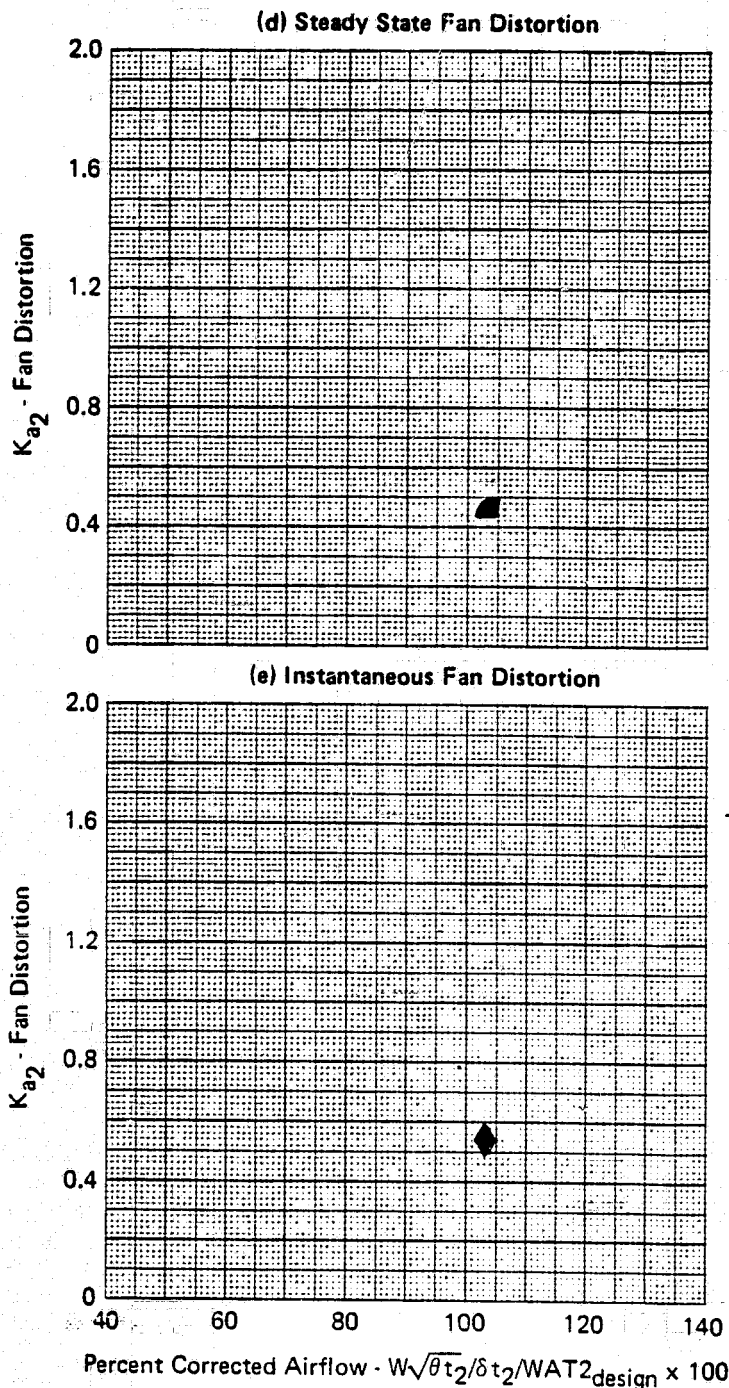
FLIGHT - NASA Data Study
 Part/Point - 421/17, Ident 40
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -5.00



GP77-0658-5

FIGURE G-40 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.17$, $\alpha = 10.6$, $\beta = 0.0$, $WAT2 = 103.4\%$

FLIGHT - NASA Data Study
 Part/Point - 421/17, Ident 40
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -5.00



GP77-0658-3

FIGURE G-40 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.17$, $\alpha = 10.6$, $\beta = 0.0$, $WAT2 = 103.4\%$

FLIGHT - NASA Data Study
 Part/Point - 421/17, Ident 40
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -5.00

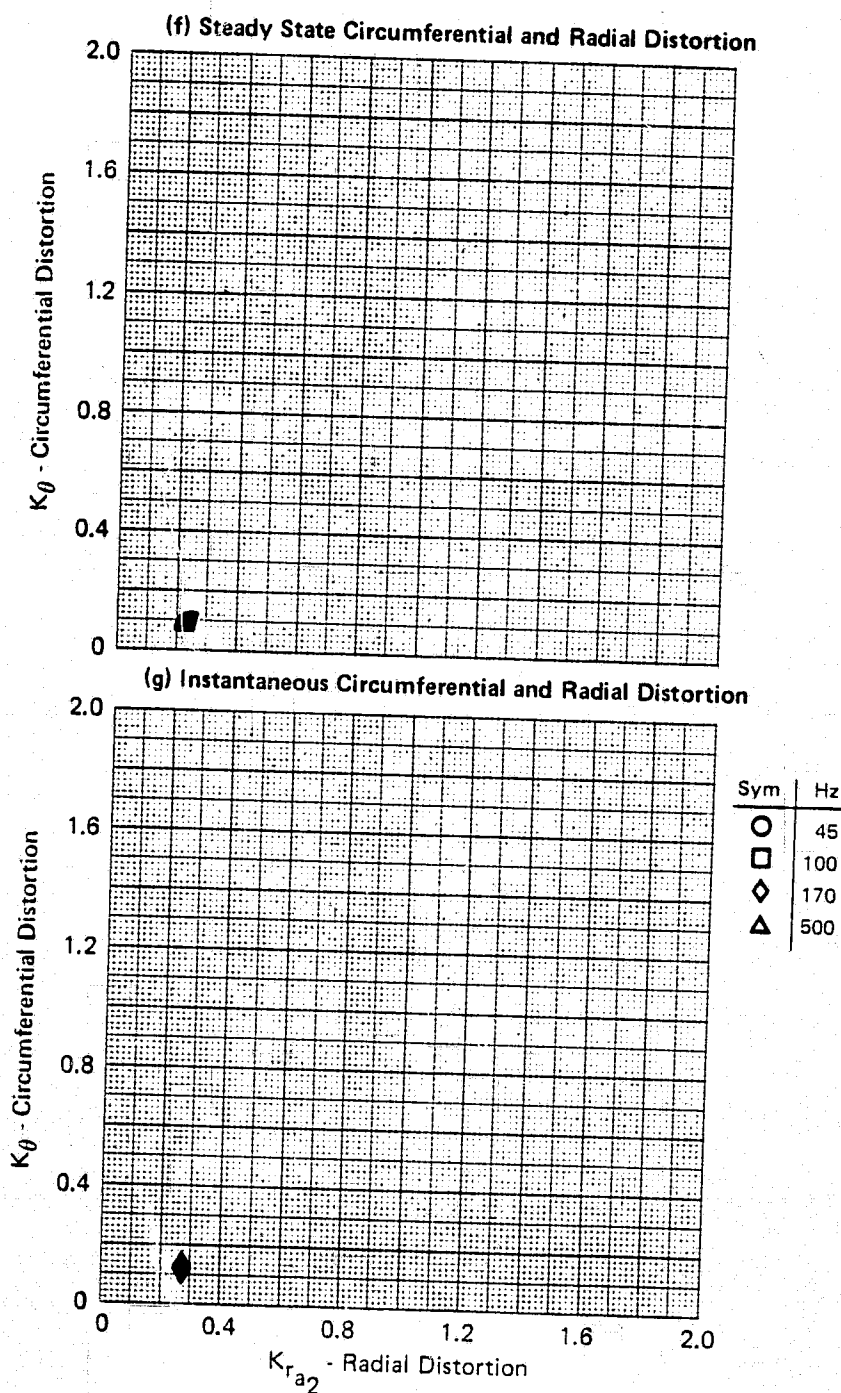


FIGURE G-40 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.17$, $\alpha = 10.6$, $\beta = 0.0$, WAT2 = 103.4 %

GP77-0658-2

FLIGHT - NASA Data Study
 Part/Point - 421/17, Ident 40
 RHO DELTA3 BYPASS CIVV
 7.0 11.0 0.0 -5.00

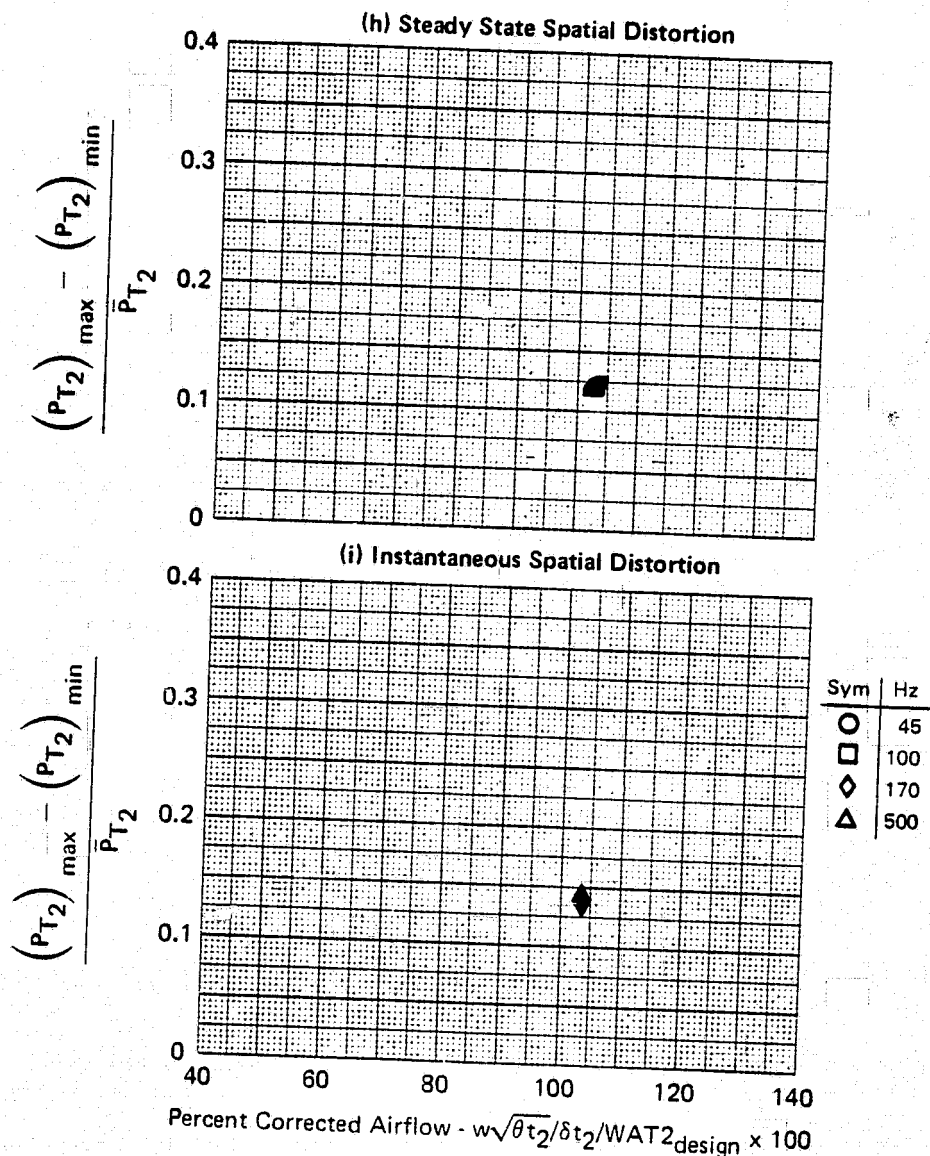


FIGURE G-40 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.17$, $\alpha = 10.6$, $\beta = 0.0$, $WAT2 = 103.4\%$

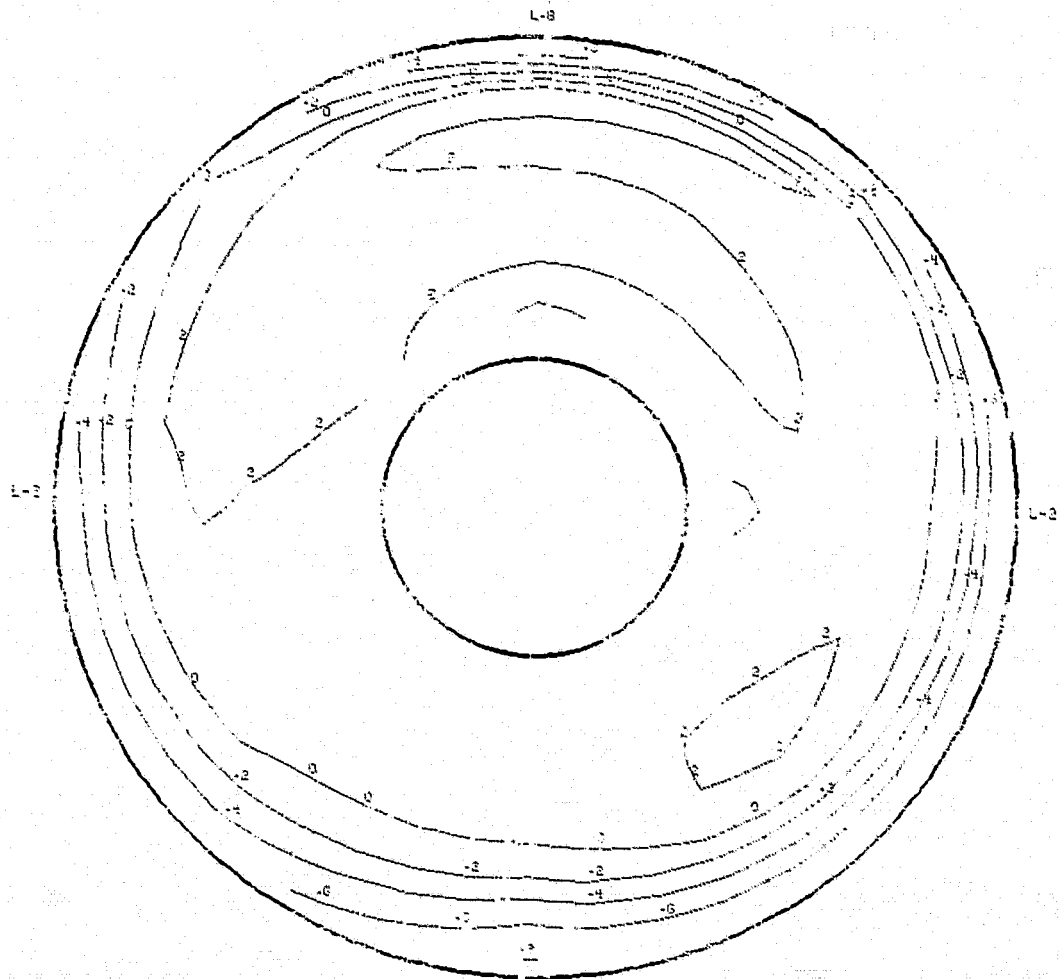
GP77-0658-4

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/17 IDENT, 40
THE SEGMENT START TIME WAS AT 21:18:48.248

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.17	10.6	0.0	15488(50748)	7.0	11.0	0.0	103.4%	-5.000
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	K0SP	D2
25.56(3.707)	1.0	.0885	.2405	.3740	.4595	.0335		.1197

40 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 25.56 kPa (3.707 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

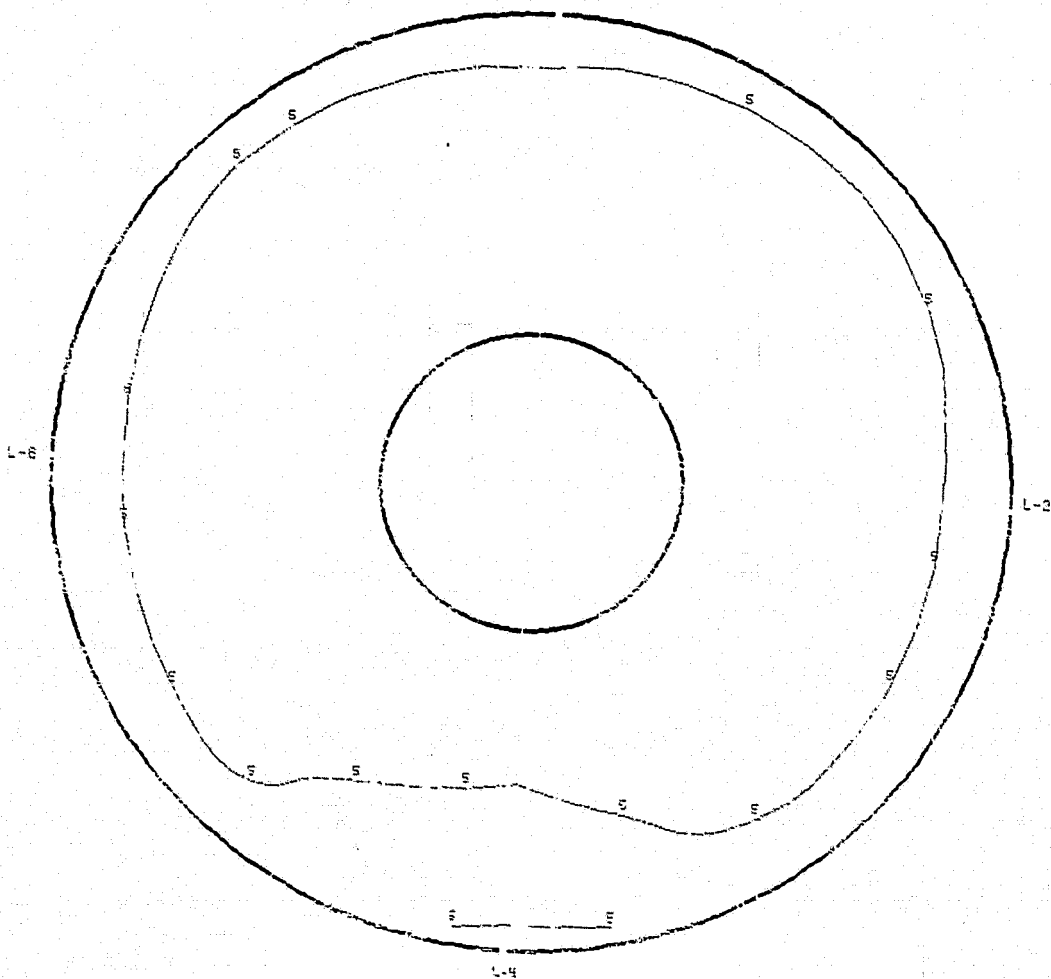
FIGURE G-40 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.17$, $\alpha = 10.6$, $\beta = 0.0$, WAT2 = 103.4 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/17 IDENT. 40
THE SEGMENT START TIME WAS AT 21:18:48.248

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.17	10.6	0.0	16468(50748)	7.0	11.0	0.0	103.4%	-5.000

**40(k) Turbulence Contour
170 Hz**



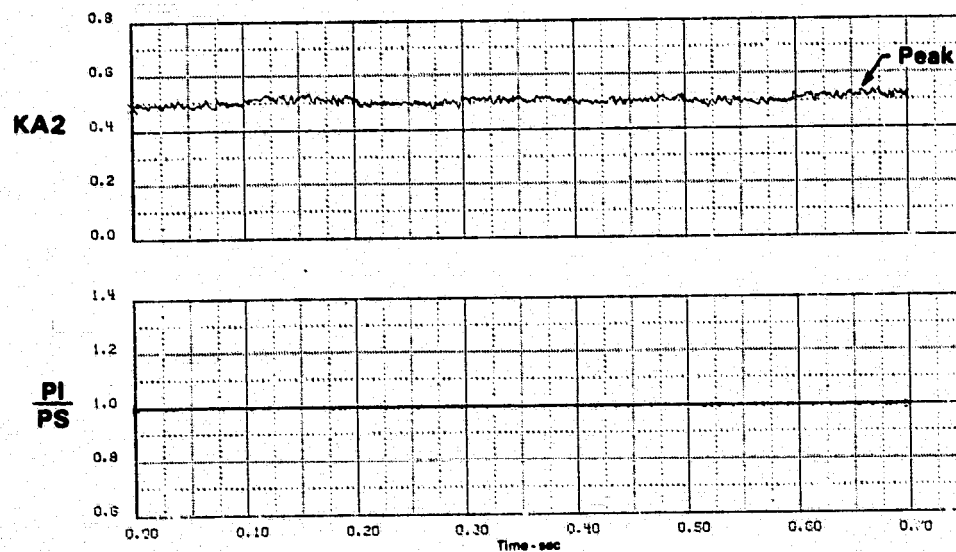
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0033
FIGURE G-40 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.17$, $\alpha = 10.6$, $\beta = 0.0$, $WAT2 = 103.4\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/17 IDENT. 40
THE SEGMENT START TIME WAS AT 21:18:48.248

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.17	10.6	0.0	15468(50748)	7.0	11.0	0.0	103.4%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
25.37(3.690)	.9927	.1201	.2690	.4167	.5368	.0773	.0760	.1392

40(I) Time History Plots
170 Hz



PEAK AT TIME = 0.6591 SECONDS

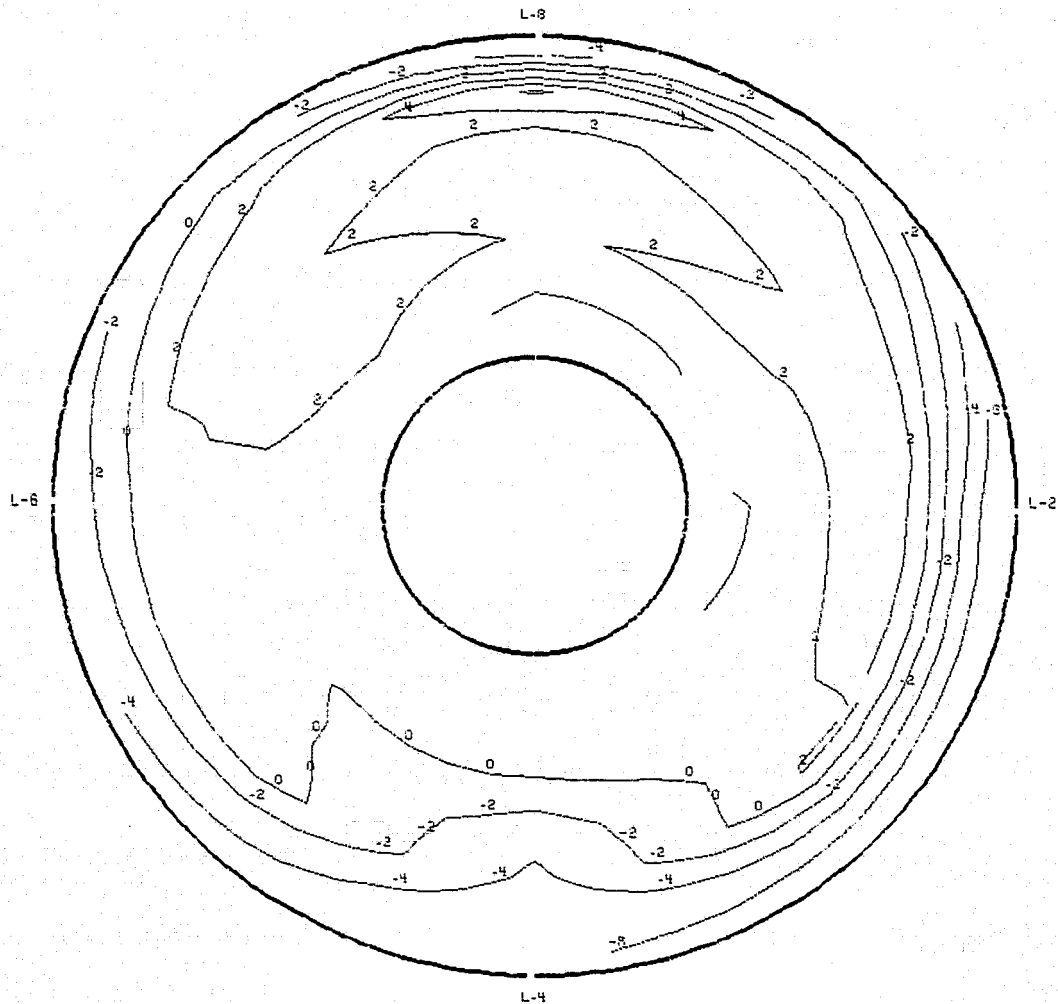
FIGURE G-40 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.17$, $\alpha = 10.6$, $\beta = 0.0$, WAT2 = 103.4 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 421/17 IDENT. 40
THE SEGMENT START TIME WAS AT 21:18:48.248

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.17	10.6	0.0	15468(50748)	7.0	11.0	0.0	103.4%	-5.000
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
25.37(3.680)	.9927	.1201	.2680	.4167	.5368	.0773	.0750	.1392

40(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 25.37 kPa (3.680 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.6591 SECONDS

FIGURE G-40 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.17$, $\alpha = 10.6$, $\beta = 0.0$, $WAT2 = 103.4\%$

FLIGHT - NASA Data Study
 Part/Point - 424/6, Ident 41
 RHO DELTA3 BYPASS CIVV
 -1.4 27.0 0.0 -14.963

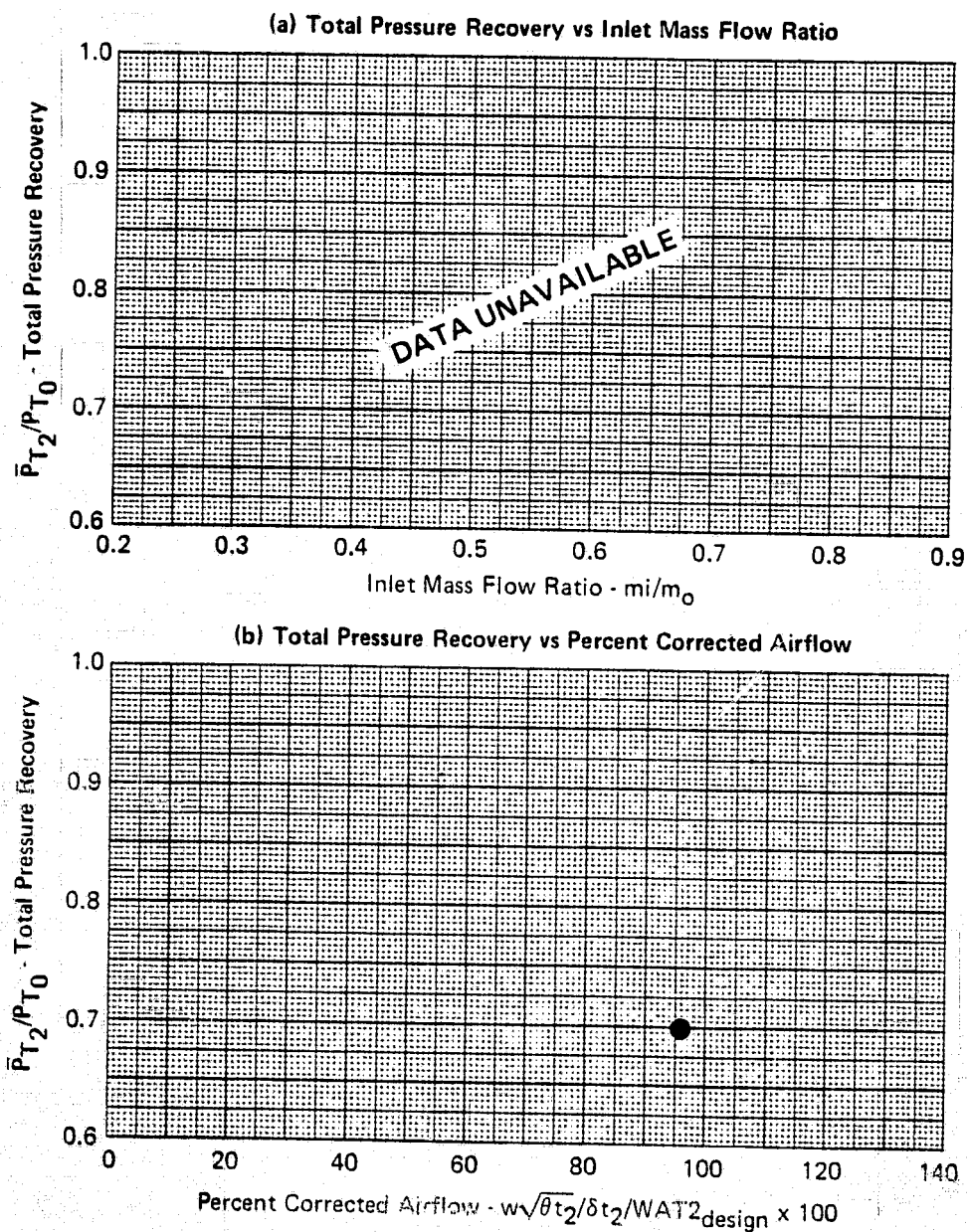
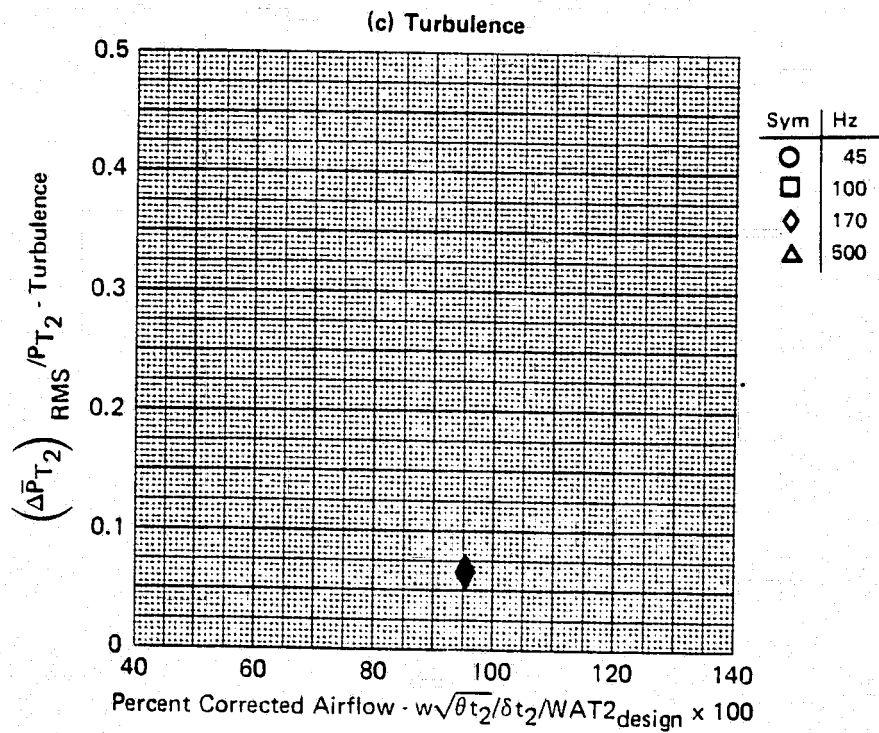


FIGURE G-41
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.54$, $\alpha = 1.5$, $\beta = 0.0$, $WAT2 = 95.4\%$

GP77-0858-1

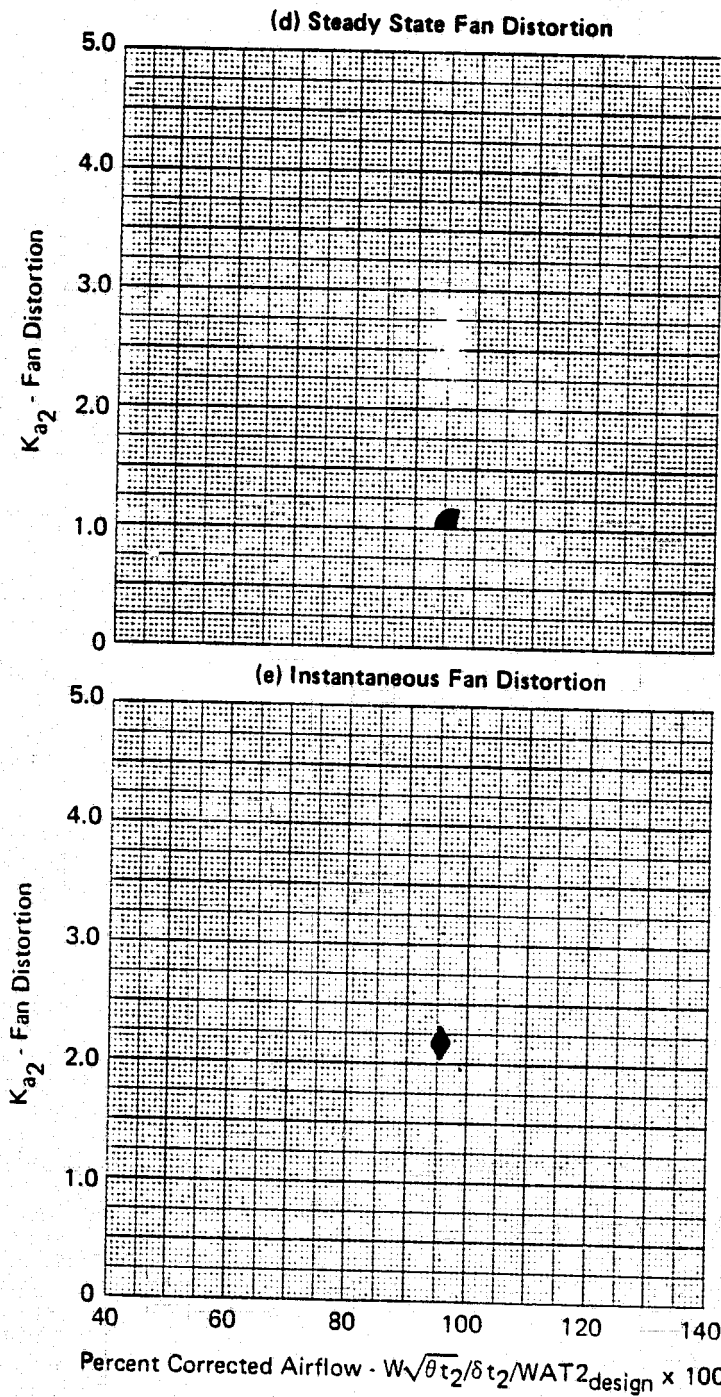
FLIGHT - NASA Data Study
 Part/Point - 424/6, Ident 41
 RHO DELTA3 BYPASS CIVV
 -1.4 27.0 0.0 -14.963



GP77-0658-5

FIGURE G-41 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.54$, $\alpha = 1.5$, $\beta = 0.0$, $WAT2 = 95.4\%$

FLIGHT - NASA Data Study
 Part/Point - 424/6, Ident 41
 RHO DELTA3 BYPASS CIVV
 -1.4 27.0 0.0 -14.963



GP77-0658-3

FIGURE G-41 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.54$, $\alpha = 1.5$, $\beta = 0.0$, $WAT2 = 95.4\%$

FLIGHT - NASA Data Study
 Part/Point - 424/6, Ident 41
 RHO DELTA3 BYPASS CIVV
 -1.4 27.0 0.0 -14.963

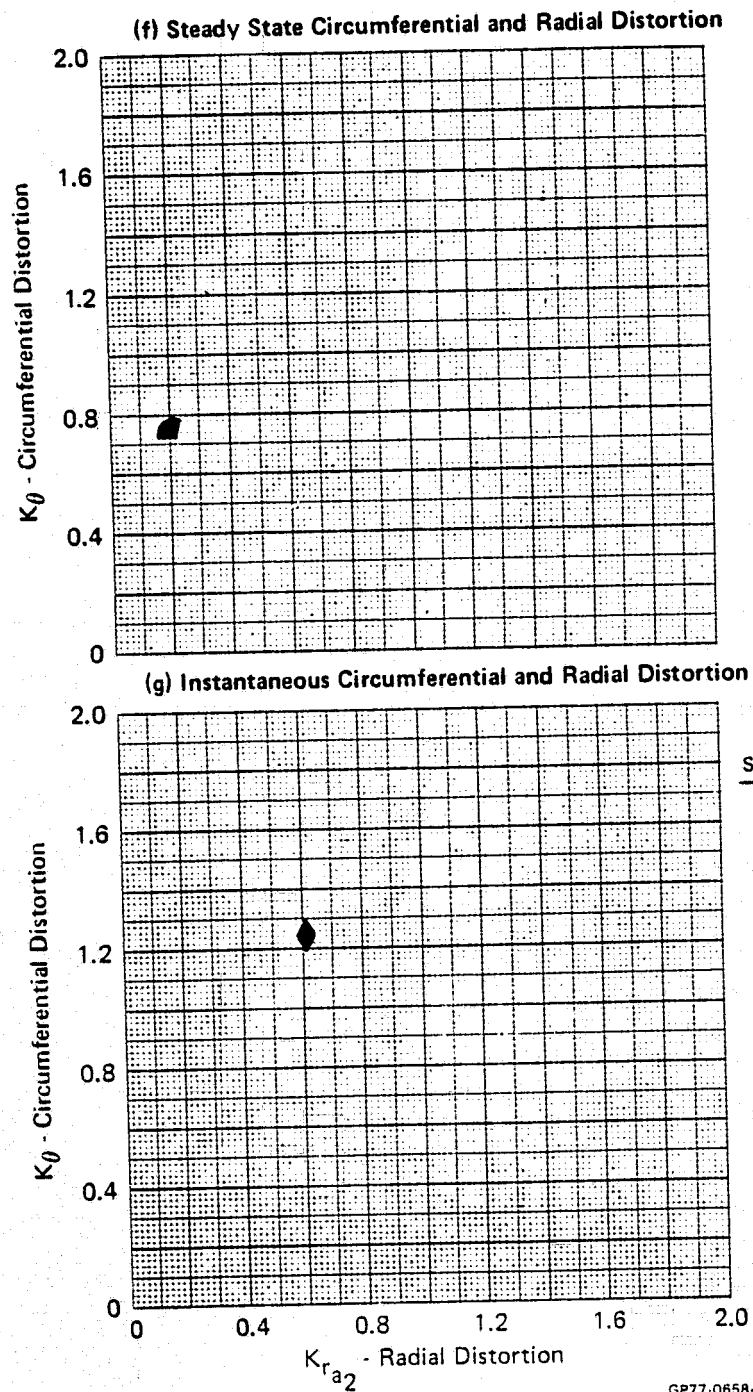


FIGURE G-41 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.54$, $\alpha = 1.5$, $\beta = 0.0$, WAT2 = 95.4 %

FLIGHT - NASA Data Study
 Part/Point - 424/6, Ident 41
 RHO DELTA3 BYPASS CIVV
 -1.4 27.0 0.0 -14.963

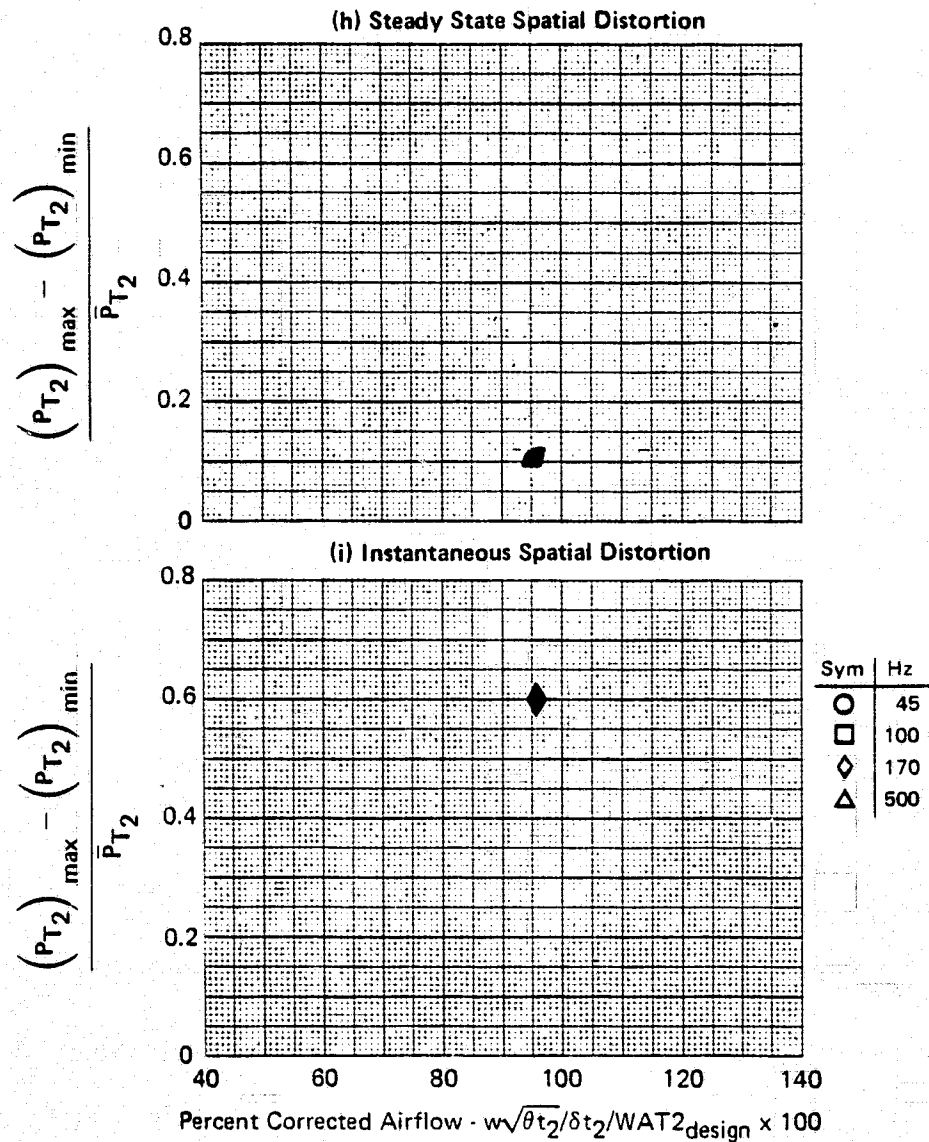


FIGURE G-41 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.54$, $\alpha = 1.5$, $\beta = 0.0$, $WAT2 = 95.4\%$

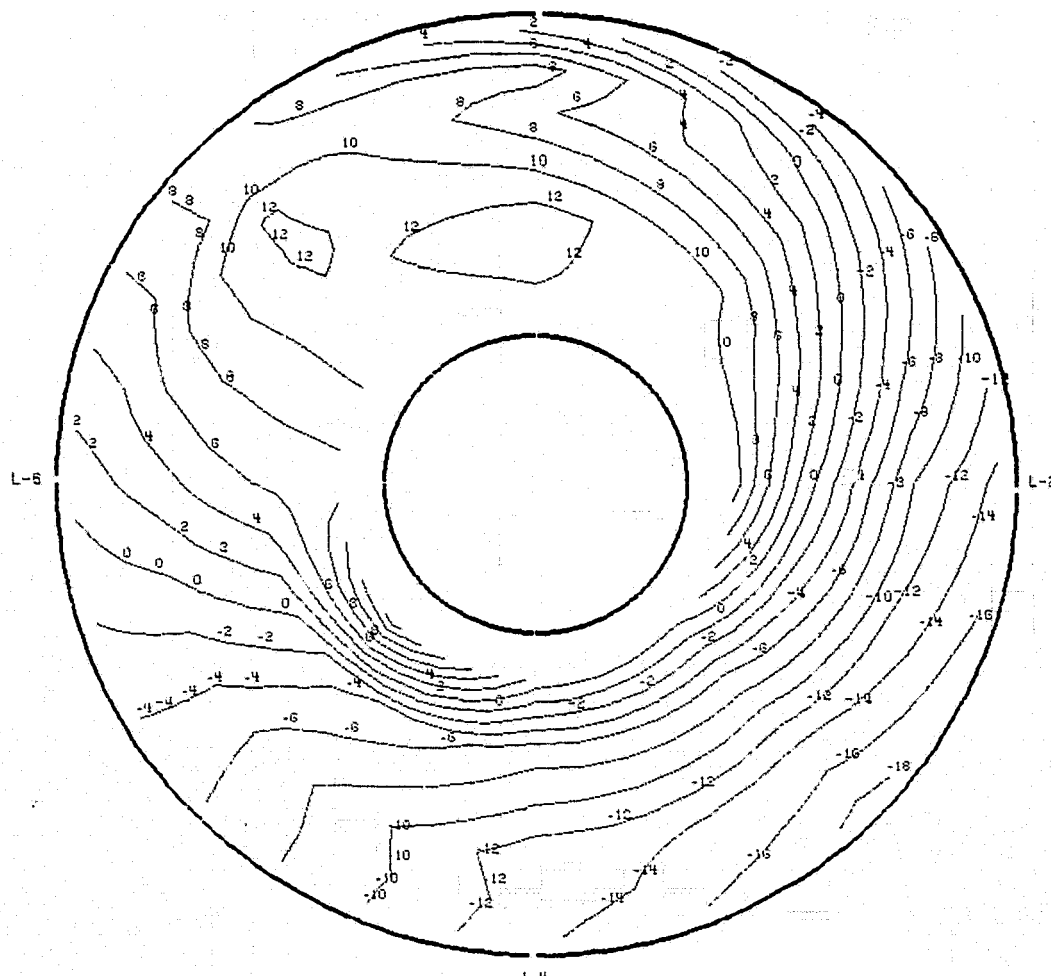
GP77-0658-4

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/6 IDENT, 41
THE SEGMENT START TIME WAS AT 04:06:27.378

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.54	1.5	0.0	14573(47813)	-1.4	27.0	0.0	95.4%	-14.963
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
35.05(5.084)	1.0	.7533	.1965	.3677	1.1208	.5929	—	.1043

41 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 35.05 kPa (5.084 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

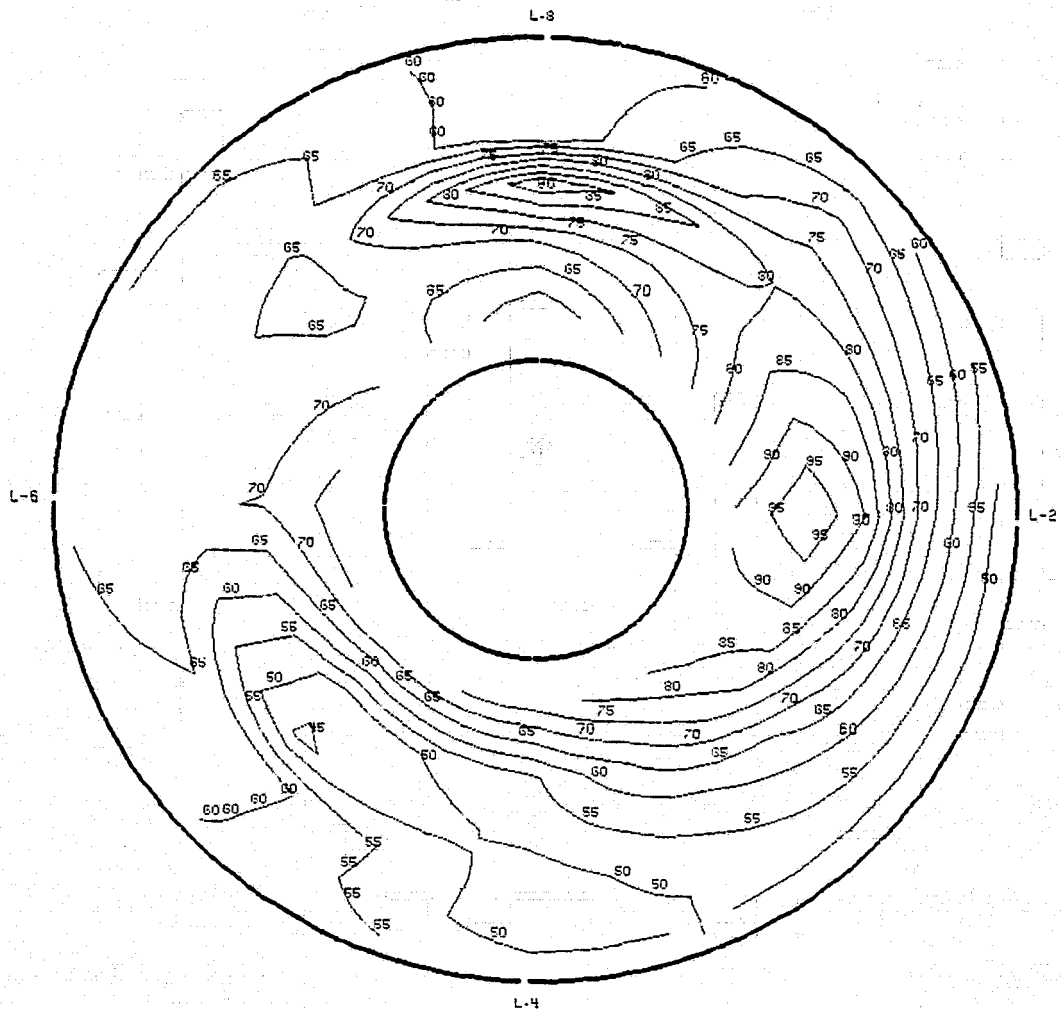
FIGURE G-41 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.54$, $\alpha = 1.5$, $\beta = 0.0$, WAT2 = 95.4 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/6 IDENT. 41
THE SEGMENT START TIME WAS AT 04:06:27.378

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.54	1.5	0.0	14673(47813)	-1.4	27.0	0.0	95.4%	-14.963

41(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0660

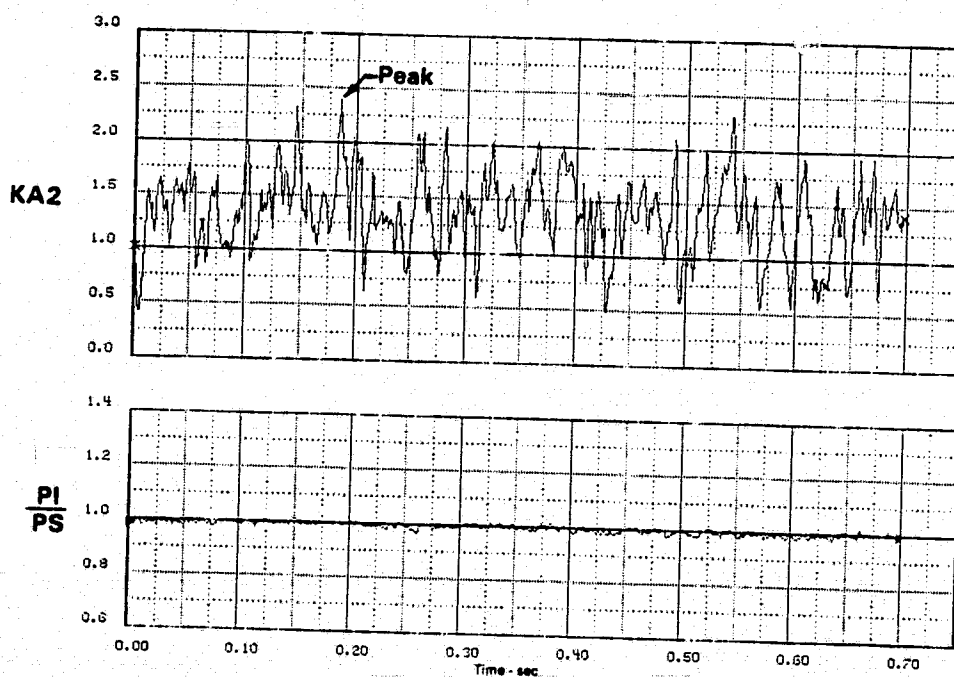
FIGURE G-41 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.54$, $\alpha = 1.5$, $\beta = 0.0$, WAT2 = 95.4 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/6 IDENT. 41
THE SEGMENT START TIME WAS AT 04:06:27.378

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.54	1.5	0.0	14575(47817)	-1.4	27.0	0.0	95.4%	-14.963
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
34.82(5.06)	0.9933	1.2440	.6105	1.1422	2.3880	1.6773	1.0860	.6046

41 (I) Time History Plots
170 Hz



PEAK AT TIME = 0.1855 SECONDS

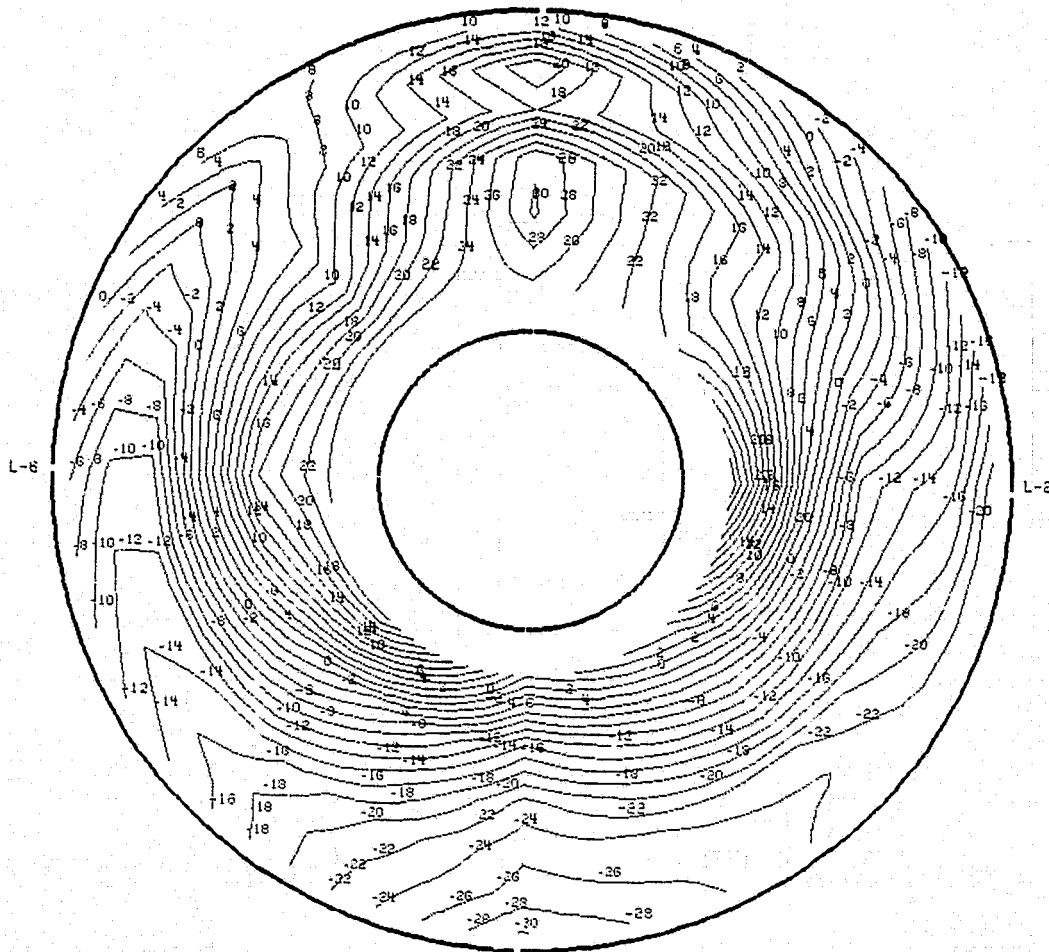
FIGURE G-41 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.54$, $\alpha = 1.5$, $\beta = 0.0$, WAT2 = 95.4 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 424/8 IDENT.41
THE SEGMENT START TIME WAS AT 04:08:27.378

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.54	1.5	0.0	14575(47817)	-1.4	27.0	0.0	95.4%	-14.963
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	KQSP	D2
34.82(5.05)	0.9933	1.2440	.6105	1.1422	2.3860	1.8773	1.0860	.6048

41(m) Instantaneous Total Pressure Contour at Peak Instantaneous Ka_2
170 Hz



MEAN FACE PRESSURE = 34.82 kPa (5.050 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.18555 SECONDS

FIGURE G-41 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.54$, $\alpha = 1.5$, $\beta = 0.0$, WAT2 = 95.4 %

SERIES VIII - NASA Data Study

Part/Point - 206/9, Ident 42

RHO	DELTA3	BYPASS	CIVV
-2.0	13.5	0.0	-21.80

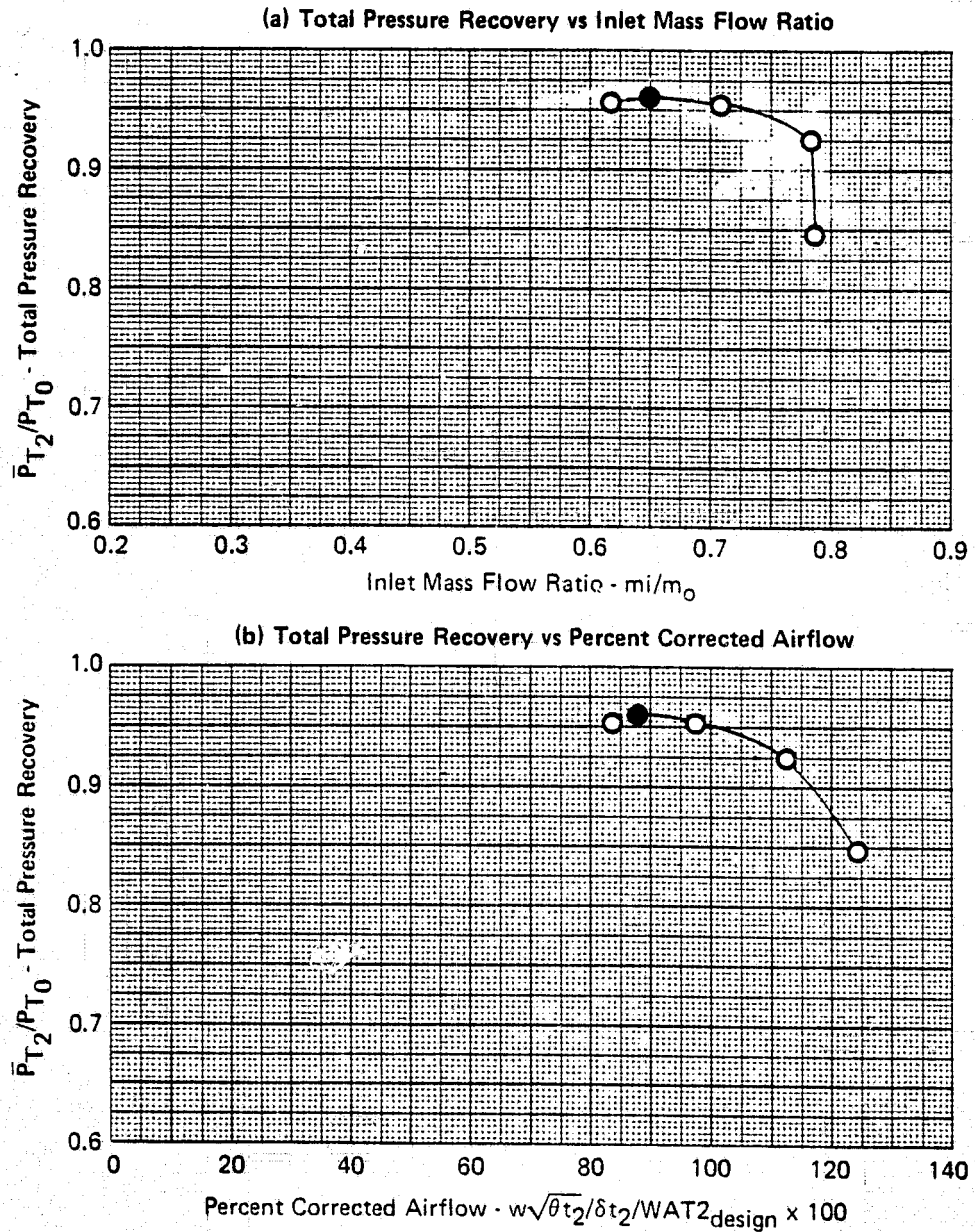
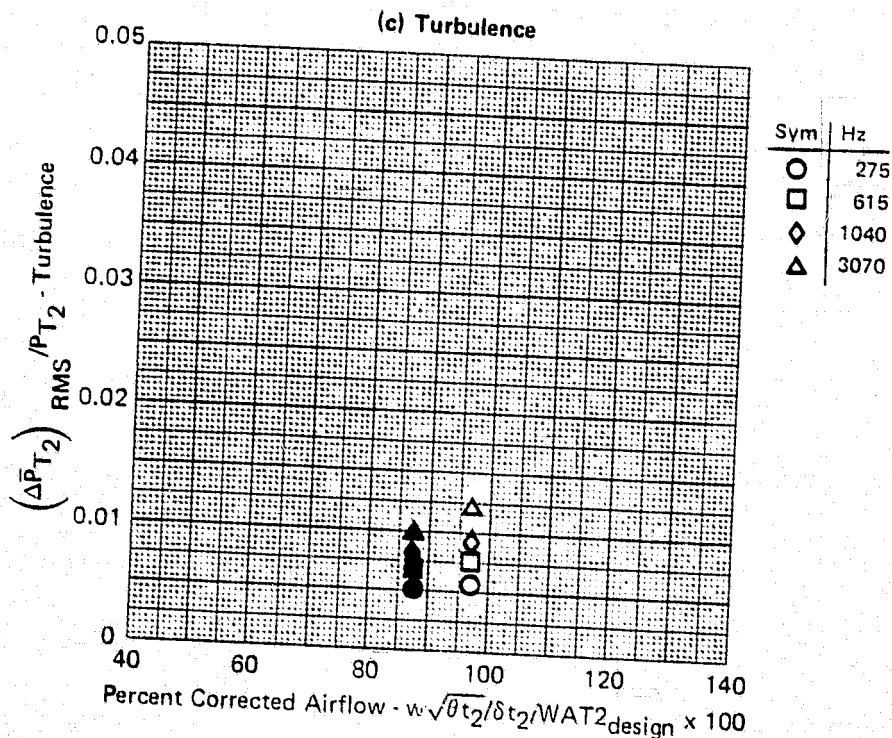


FIGURE G-42
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 87.3\%$

GP77-0658-1

SERIES VIII - NASA Data Study
 Part/Point - 206/9, Ident 42
 RHO DELTA3 BYPASS CIVV
 -2.0 13.5 0.0 -21.80



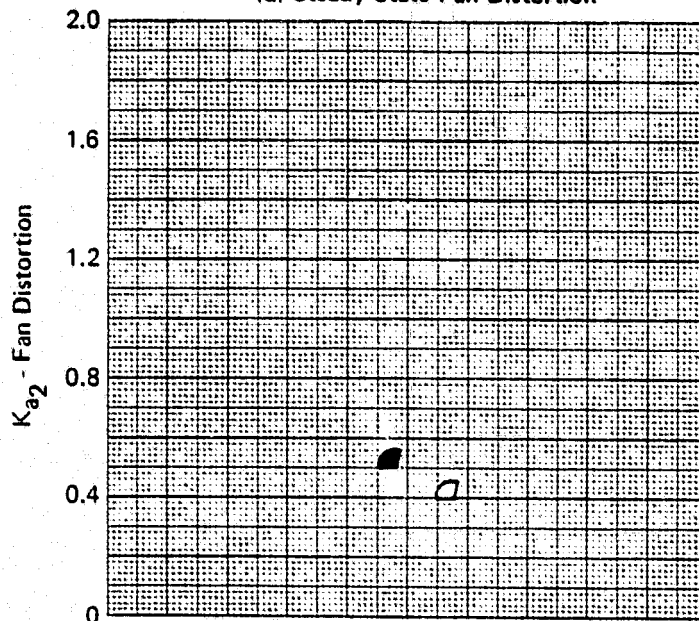
GP77-0658-5

FIGURE G-42 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 87.3\%$

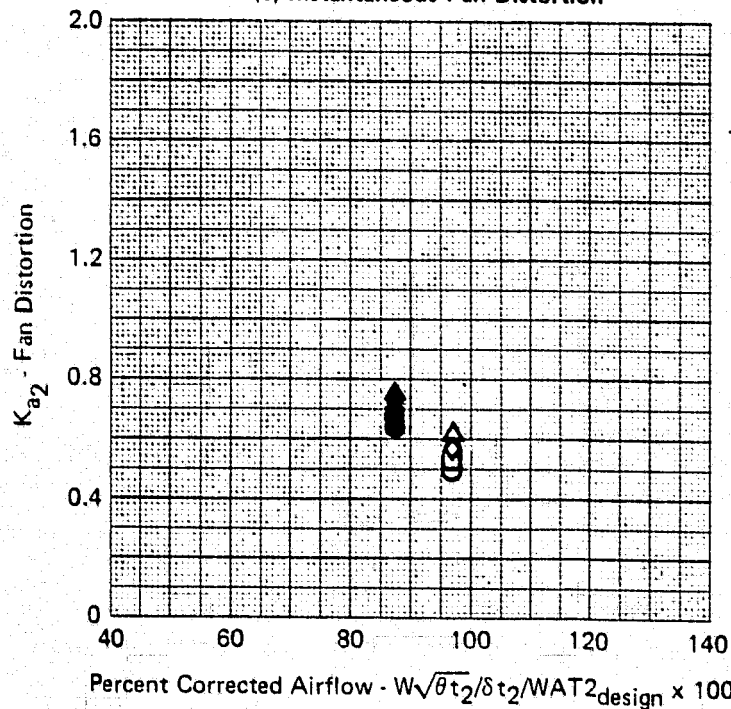
SERIES VIII - NASA Data Study
Part/Point - 206/9, Ident 42

RHO DELTA3 BYPASS CIVV
-2.0 13.5 0.0 -21.80

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion



Sym	Hz
○	275
□	165
◇	1040
△	3070

FIGURE G-42 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 87.3\%$

GP77-Q658-3

SERIES VIII - NASA Data Study
 Part/Point - 206/9, Ident 42
 RHO DELTA3 BYPASS CIVV
 -2.0 13.5 0.0 -21.80

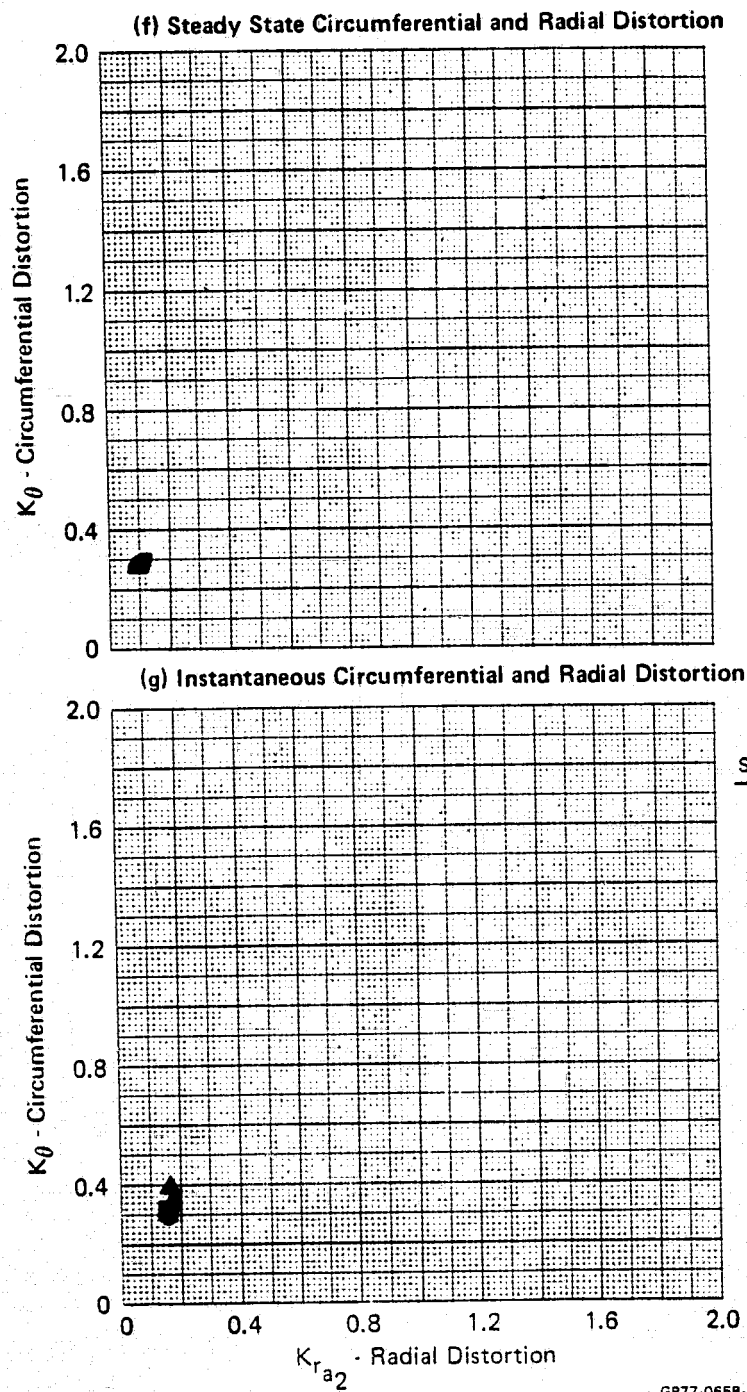
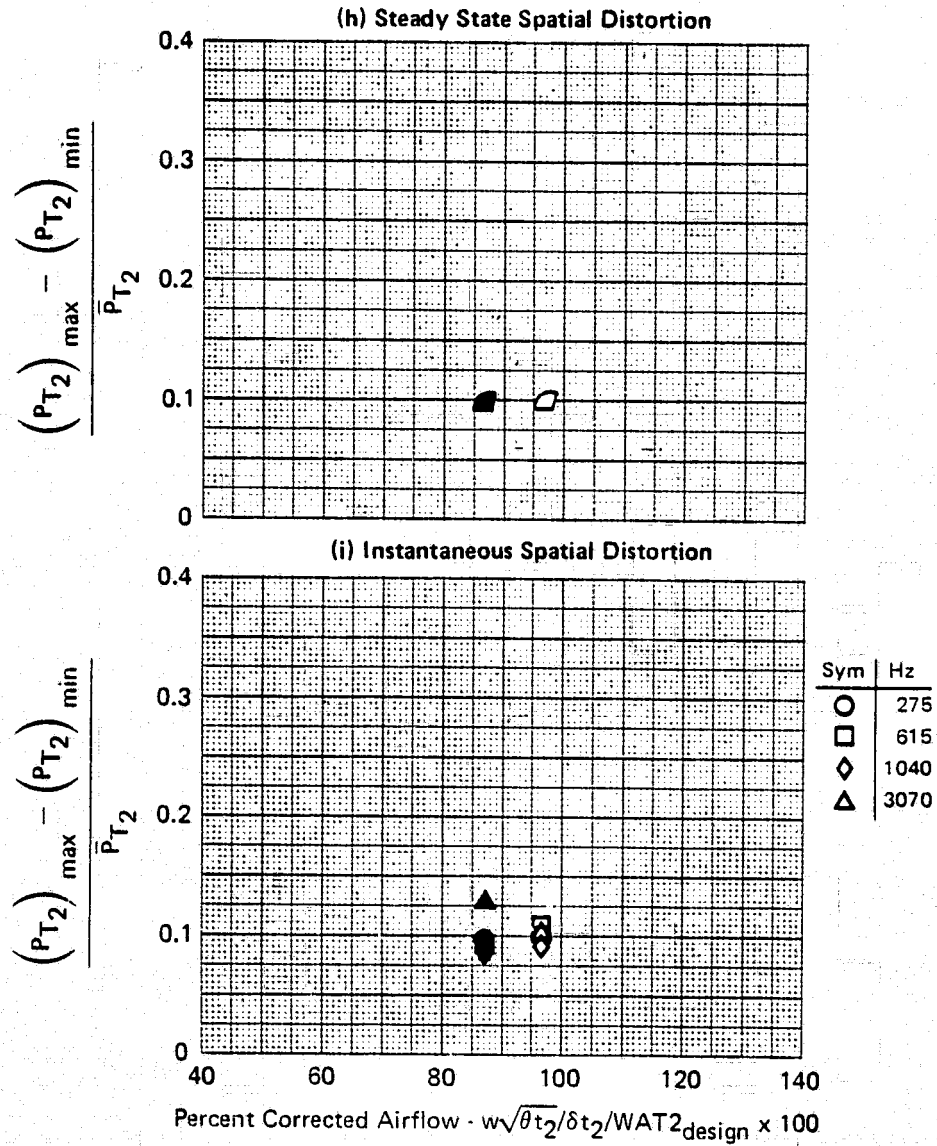


FIGURE G-42 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 87.3 %

SERIES VIII - NASA Data Study
 Part/Point - 206/9, Ident 42
 RHO DELTA3 BYPASS CIVV
 -2.0 13.5 0.0 -21.80



GP77-0858-4

FIGURE G-42 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 87.3\%$

MAINT	FLIGHT	DEPT	NO	FLIGHT	EXPEND	MAINT	FLIGHT
						87.3%	0.0%
32.64 (4.734)							

A circular diagram, likely a historical astronomical or astrological chart. It features a large outer circle and a smaller inner circle. The space between the circles is divided into segments by radial lines. The segments are labeled with numbers 1 through 12, arranged in a clockwise direction starting from the top. Some segments contain additional numbers or symbols, such as '12' in the top-left segment, '11' in the top-right segment, '10' in the right segment, '9' in the bottom-right segment, '8' in the bottom segment, '7' in the bottom-left segment, '6' in the left segment, '5' in the top-left segment, '4' in the top segment, '3' in the top-right segment, '2' in the right segment, and '1' in the bottom-right segment. The diagram is drawn with thin black lines on a white background.

FIGURE G-42 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 87.3\%$

ORDER 4211 - WAFB DTD STUDY

DATE: 08/01/2000 00:00:00 42

FILE: 08/01/2000 00:00:00 42

NOTE

PLANE

WAT2

WAT1

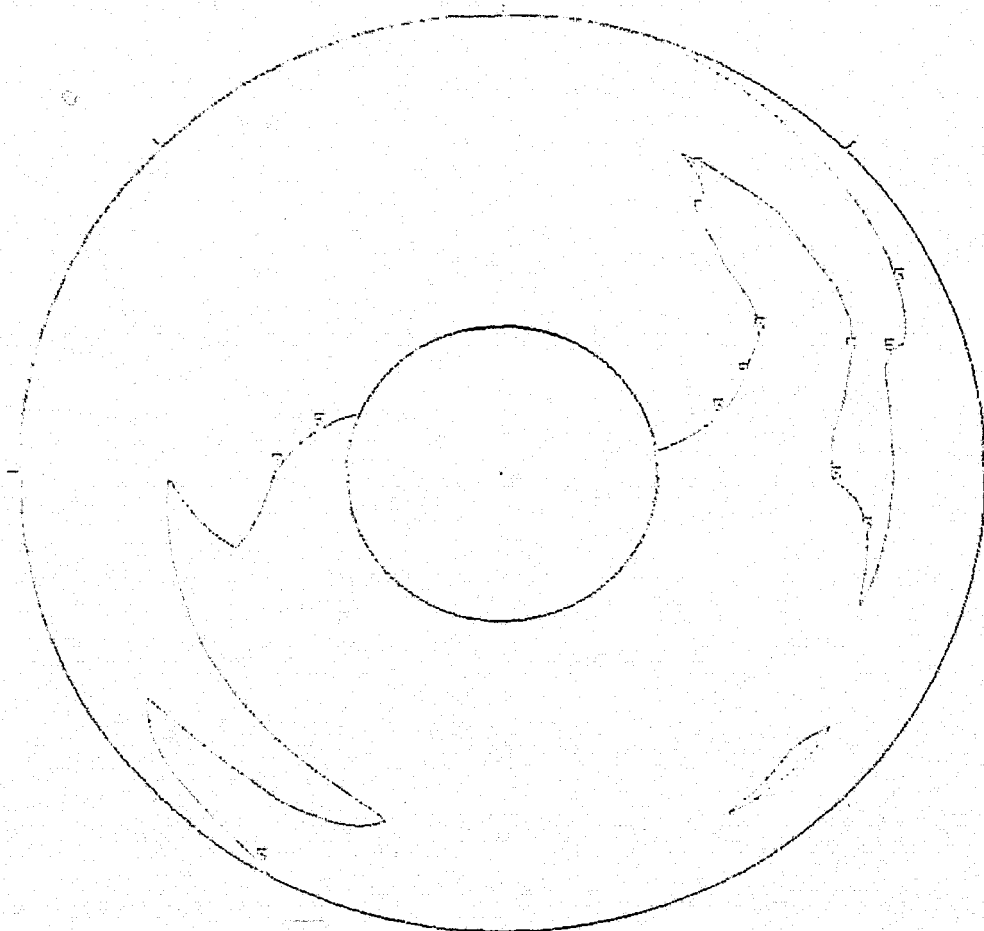
WAT3

WAT4

NOTE
87.3%

QIVV
-21.3

42(k) Turbulence Contour 275 Hz



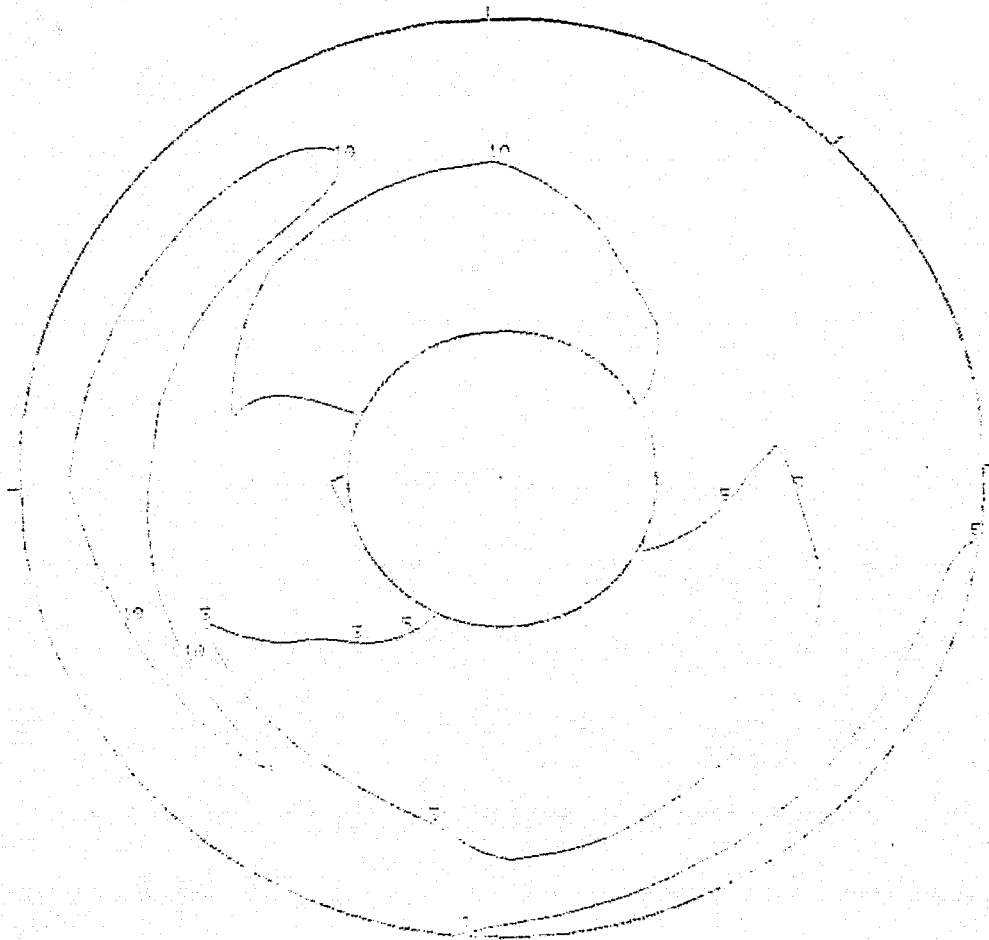
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 206 / 9 IDENT. 42
THE SEGMENT START TIME WAS AT 3:42: 5.051

MACH	ALPHA	BETA	PHI	DELTA3	BYPASS	WAT2	CIVV
1.6	-4	0	-2.0	13.5	0.0	87.3%	-21.3

42 (I) Turbulence Contour
615 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00719

FIGURE G-42 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 87.3 %

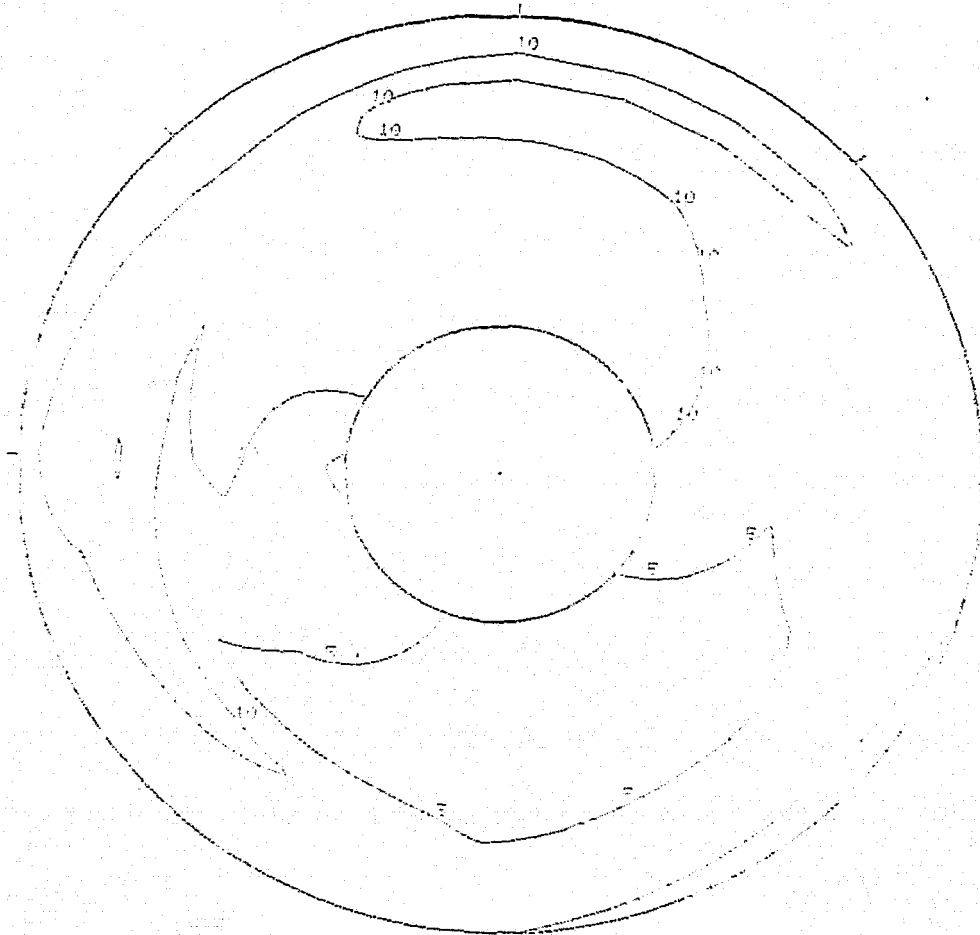
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 206 / 8 IDENT. 42
THE SEGMENT START TIME WAS AT 3:42: 5.051

MACH	ALPHA	BETA	PHI	DELTA3	BYPASS	WAT2	CIWV
1.6	-4	0	-2.0	13.5	0.0	87.3%	-21.8

42(m) Turbulence Contour
1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00826
FIGURE G-42 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 87.3\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 206 / 9 IDENT. 42
THE SEGMENT START TIME WAS AT 3:42: 5.045

MACH
1.6

ALPHA
-4

BETA
0

RHO
-2.0

DELTA3
13.5

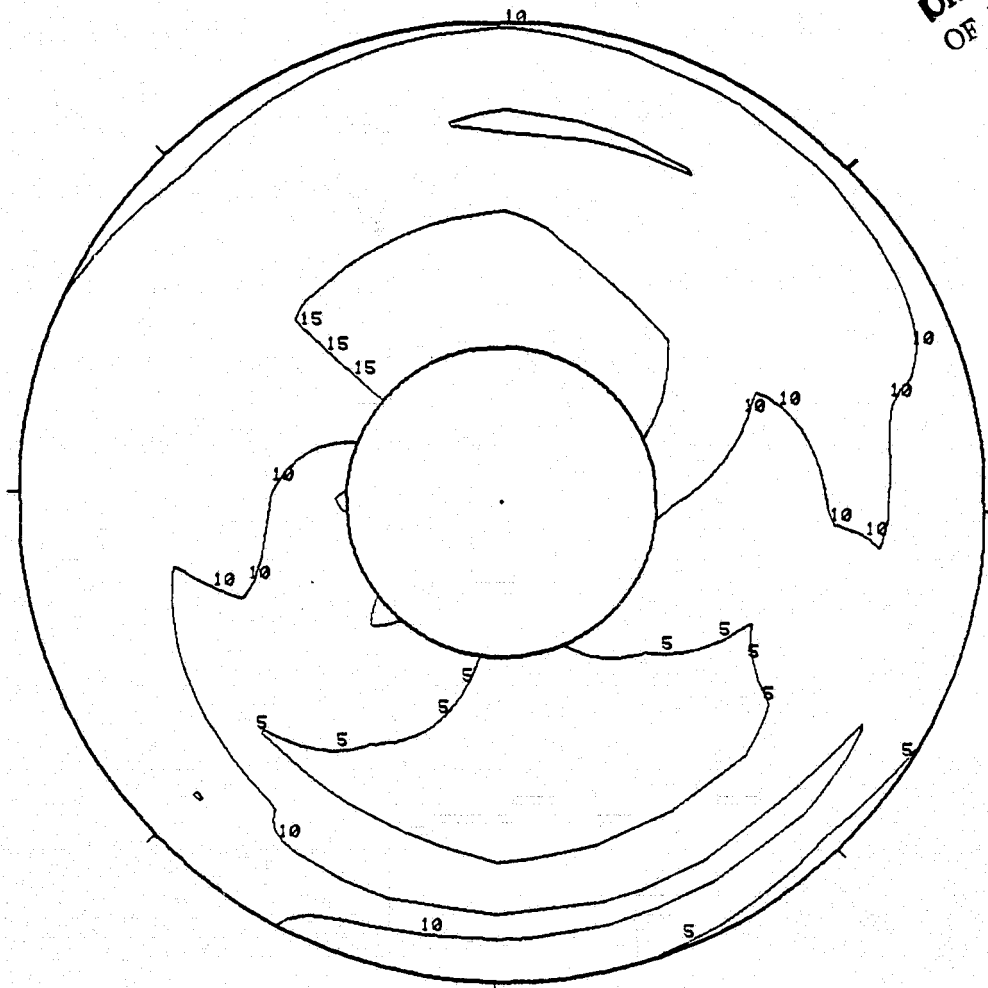
BYPASS
0.2

WAT2
87.3%

CIVV
-21.8

42 (n) Turbulence Contour
3070 Hz

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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01007

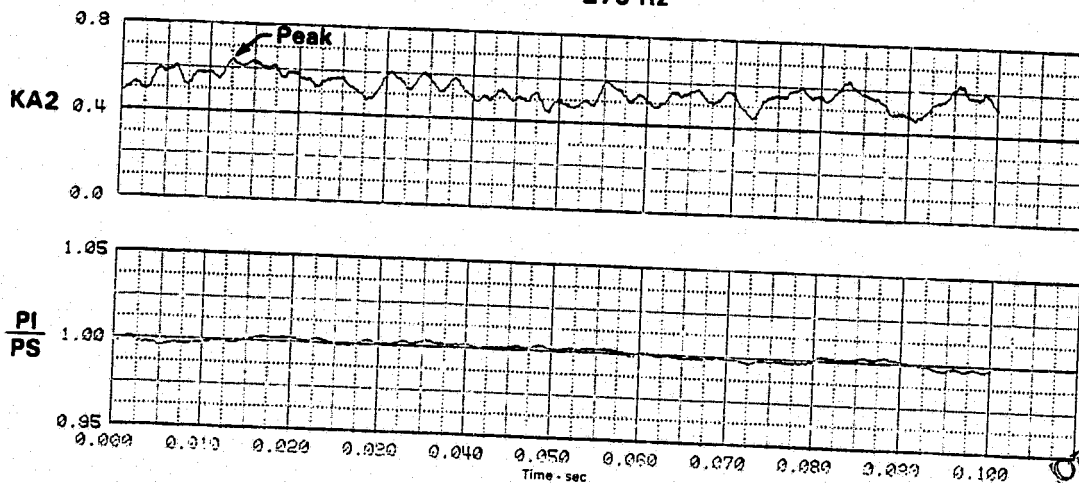
FIGURE G-42 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 87.3 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 208 / 0 IDENT. 42
THE SEGMENT START TIME WAS AT 3:42: 5.045

MACH 1.6	ALPHA -4	BETA 0	PHO -2.0	DELTA3 13.6	BYPASS 0.0	WAT2 87.3%	CIVV -21.2
PI 32.65 (4.735)	PI/PS 1.000	KIVETA 0.309	KPO2 0.145	SKPO2 0.121	KAS 0.250	KOS 0.251	LOPS 0.035
							O2 0.032

42(o) Time History Plots
275 Hz



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PEAK AT TIME = 0.012540 SECONDS

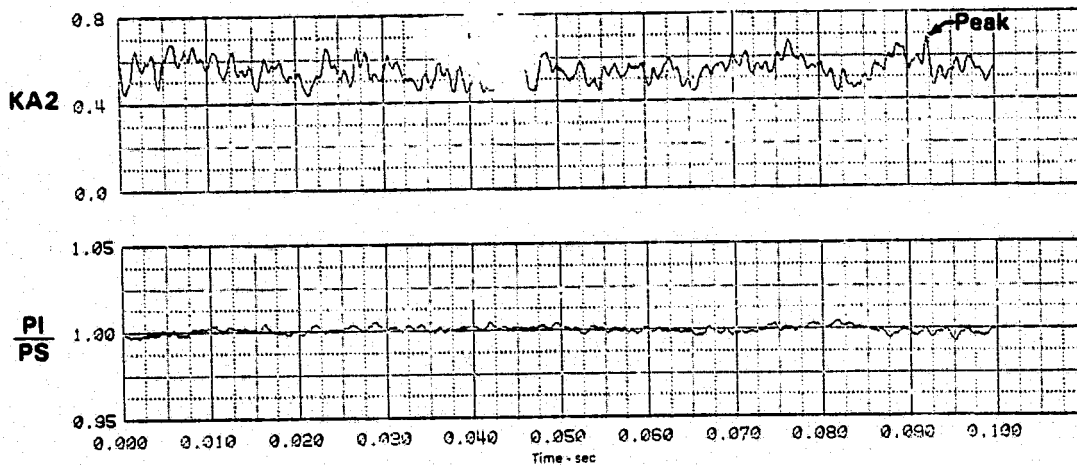
FIGURE G-42 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 87.3%

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 236 / 3 IDENT. 42
THE SEGMENT START TIME WAS AT 3:42: 5.951

MOCH 1.6	ALPHA -4	BETA 0	PHO -2.0	DELTA3 13.5	BYPASS 9.0	WAT2 87.3%	QIVV -21.2
P1 32.52 (4.717)	P1/PS 0.1503	THETA 0.021	KP22 0.154	BYPAS 0.154	K02 0.150	K02 0.152	K02P 0.1507
							Q2 0.092

42(p) Time History Plots
615 Hz



PEAK AT TIME = 0.092235 SECONDS

FIGURE G-42 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 87.3%

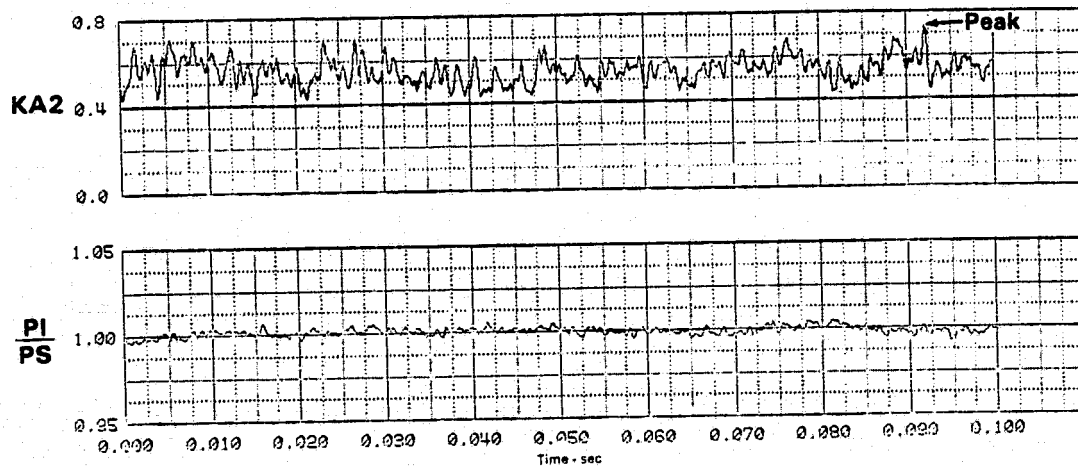
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 206 / 9 IDENT. 42
THE SEGMENT START TIME WAS AT 3:42: 5.051

MACH 1.6	ALPHA -4	BETA 0	RHO -2.0	DELTA3 12.5	BYPASS 0.0	WAT2 87.3%	CIVV -21.3
P1 32.47 (4.710)	P1-P2 0.145	KTHETA 0.333	KP02 1.163	DR020 1.941	K02 0.723	K03 0.376	K04 0.103
							D2 0.023

42(q) Time History Plots
1040 Hz



PEAK AT TIME = 0.092070 SECONDS

FIGURE G-42 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6, \alpha = -4.0, \beta = 0.0, WAT2 = 87.3\%$

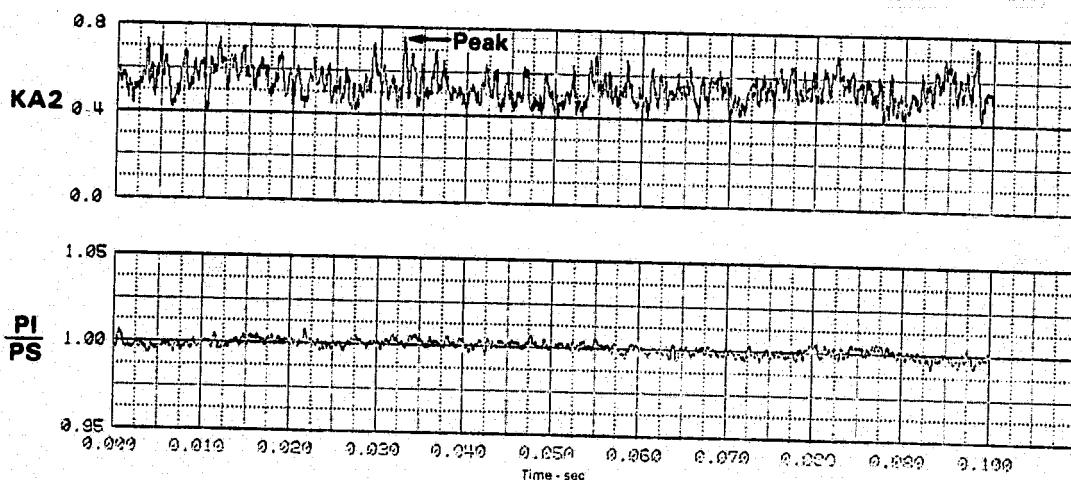
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 306 / 9 IDENT. 42
THE SEGMENT START TIME WAS AT 3:42: 5.045

MACH 1.6	ALPHA -4	BETA 0	RHO -2.0	DELTA3 13.5	BYPASS 0.0	WAT2 87.3%	CIVV -21.8
P1 32.66 (4.737)	PI/PS 1.021	KTHETA 0.338	KRA2 0.157	BKRA2 0.336	KD2 0.754	KC2 0.420	KOSP 0.423
							D2 0.129

42(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.032715 SECONDS

FIGURE G-42 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 87.3\%$

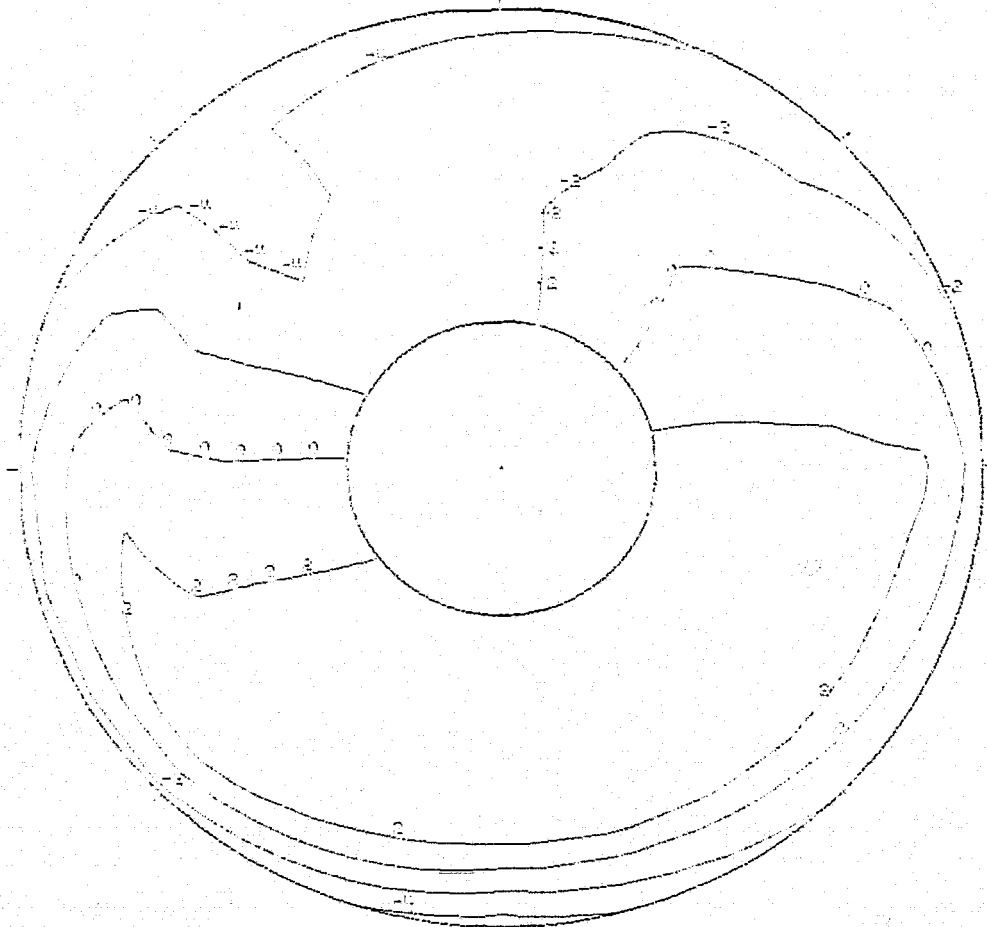
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SECTION 42 - INLET DISTORTION STUDY

INLET DISTORTION ANALYSIS - INLET 42
 THE DISTORTION ANALYSIS WAS AT 275 Hz

32.65 (4.735) 32.65 32.65 32.65 32.65 32.65 32.65 32.65 32.65
 87.3% 87.3% 87.3% 87.3% 87.3% 87.3% 87.3% 87.3%

42(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
 275 Hz



MEAN FACE PRESSURE = 32.65 kPa (4.735 PSIA)
 NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
 FROM MEAN FACE PRESSURE
 PEAK AT TIME = 0.012540 SECONDS

FIGURE G-42 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 87.3\%$

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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 206 / 9 IDENT. **42**
THE SEGMENT START TIME WAS AT 3:42: 5.051

MACH 1.6	ALPHA -4	BETA 0	RHO -2.0	DELTA9 13.5	BYPASS 0.0	WAT2 87.3%	QIVV -21.3
P1 32.52 (4.717)	P1/PS 0.936	KTHETA 0.321	KRA2 0.154	BKRA2 0.553	KAG 2.420	KCS 0.172	KOSP 0.207
							D2 0.032

**42(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
615 Hz**



MEAN FACE PRESSURE = 32.52 kPa (4.717 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.092235 SECONDS

FIGURE G-42 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 87.3 %

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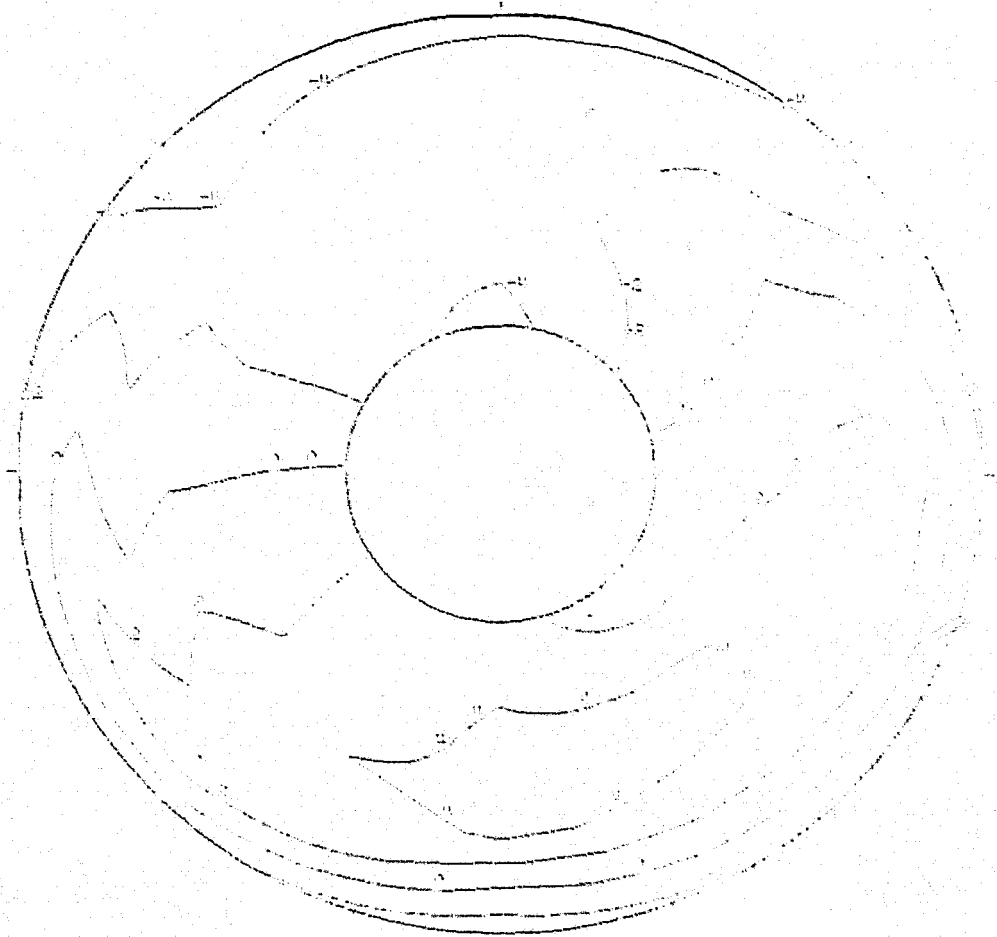
SERIES VIII - NASA DATA STUDY

DATA PART/POINT 306/0 IDENT. 42
THE SEGMENT START TIME WAS AT 2:42: 5.051

MACH	ALPHA	BETA	PHI	DELTA	EXPASS	WAT2	CIVV
1.6	-4.0	0.0	-3.0	13.5	0.0	87.3%	-21.5

32.47 (4.710) 0.09 0.0920 0.0920 0.0920 0.0920 0.0920 0.0920

**42(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
1040 Hz**



MEAN FACE PRESSURE = 32.47 kPa (4.710 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.092070 SECONDS

**FIGURE G-42 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 87.3 %**

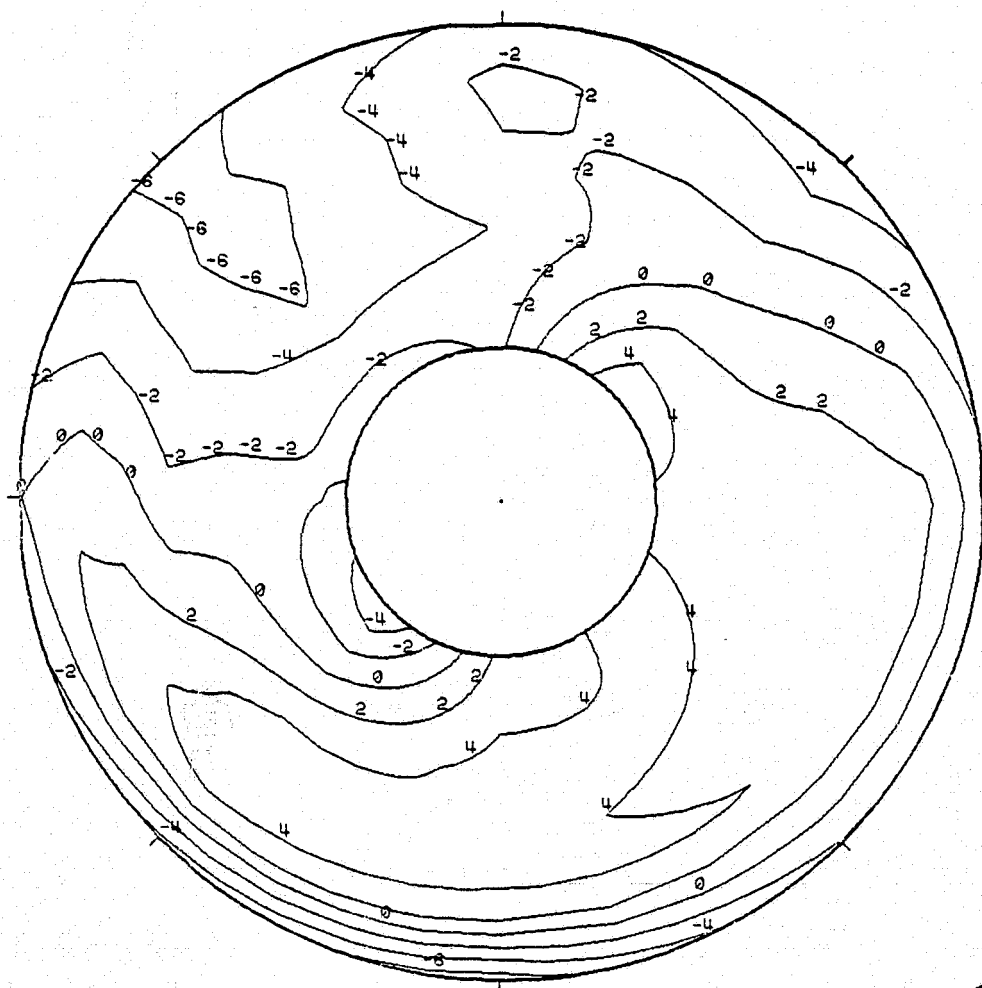
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 206 / 9 IDENT. 42
THE SEGMENT START TIME WAS AT 3:42: 5.045

MACH 1.6	ALPHA -4	BETA 0	RHO -2.0	DEL T83 13.5	BYPASS 0.0	WAT2 87.3%	CIVV -21.8
P1 32.66 (4.737)	P1/PS 1.001	KTHETA 0.388	KRA2 0.157	BKRA2 0.366	KA2 0.754	KC2 0.420	KQSP 0.428
							D2 0.129

42(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
3070 Hz



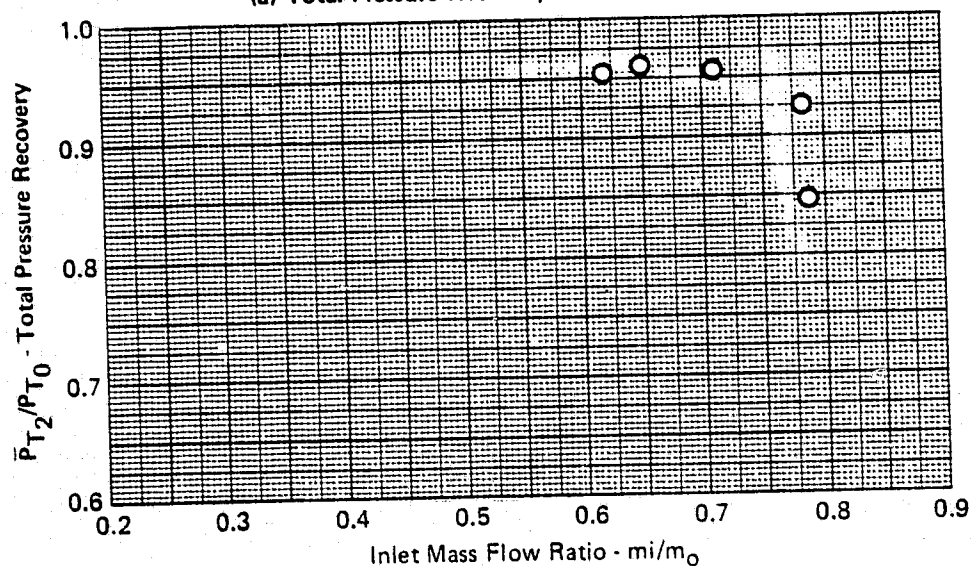
MEAN FACE PRESSURE = 32.66 kPa (4.737 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.032715 SECONDS

FIGURE G-42 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 87.3 %

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SERIES VIII - NASA Data Study
 Part/Point - 206/5, Ident 43
 RHO DELTA3 BYPASS CIVV
 -2.0 13.5 0.0 -12.00

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



(b) Total Pressure Recovery vs Percent Corrected Airflow

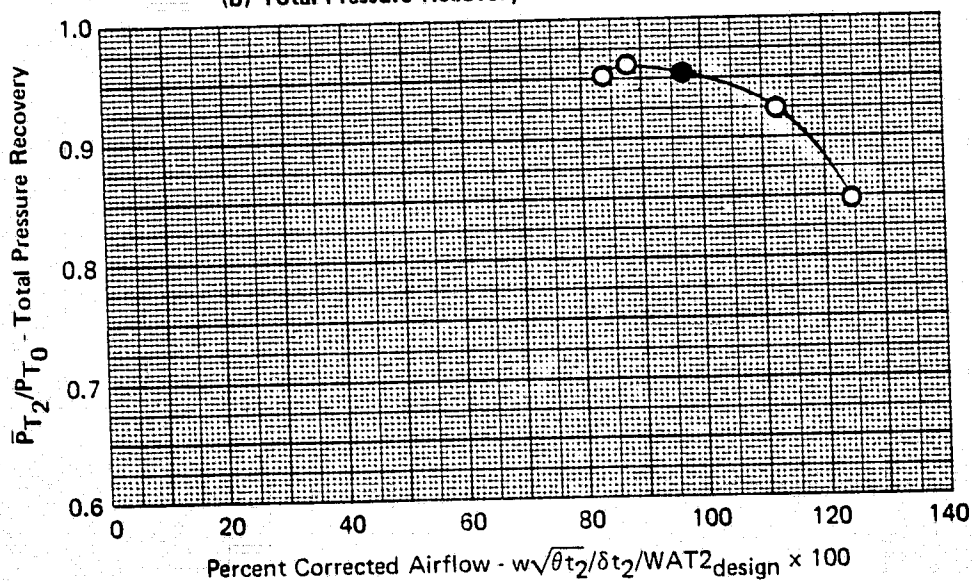


FIGURE G-43

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 96.9\%$

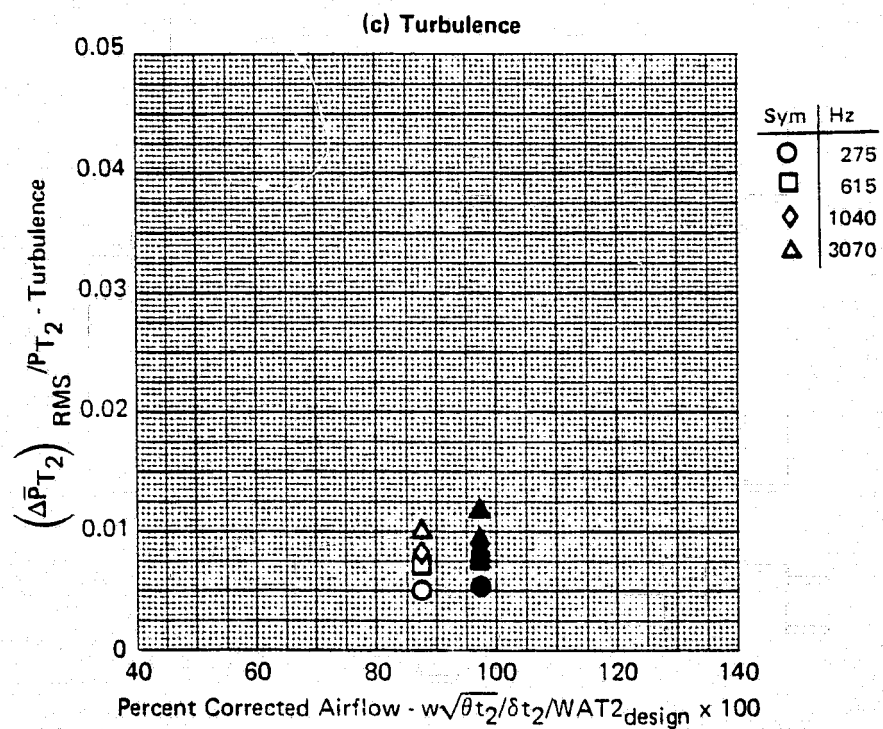
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SERIES VIII - NASA Data Study

Part/Point - 206/5, Ident 43

RHO DELTA3 BYPASS CIVV
-2.0 13.5 0.0 -12.00



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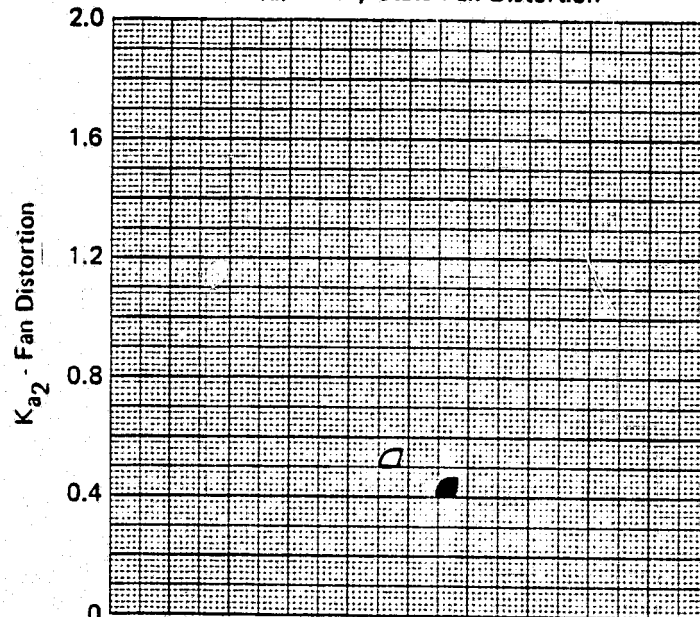
FIGURE G-43 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 96.9\%$

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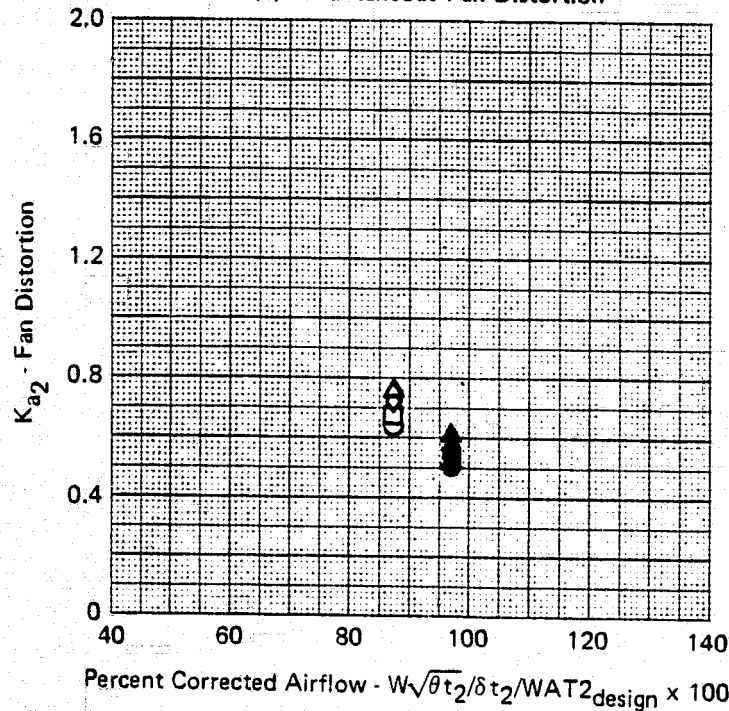
SERIES VIII - NASA Data Study
Part/Point - 206/5, Ident 43

RHO DELTA3 BYPASS CIVV
-2.0 13.5 0.0 -12.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion



Sym	Hz
○	275
□	615
◇	1040
△	3070

FIGURE G-43 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 96.9\%$

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SERIES VIII - NASA Data Study
 Part/Point - 206/5, Ident 43
 RHO DELTA3 BYPASS CIVV
 -2.0 13.5 0.0 -12.00

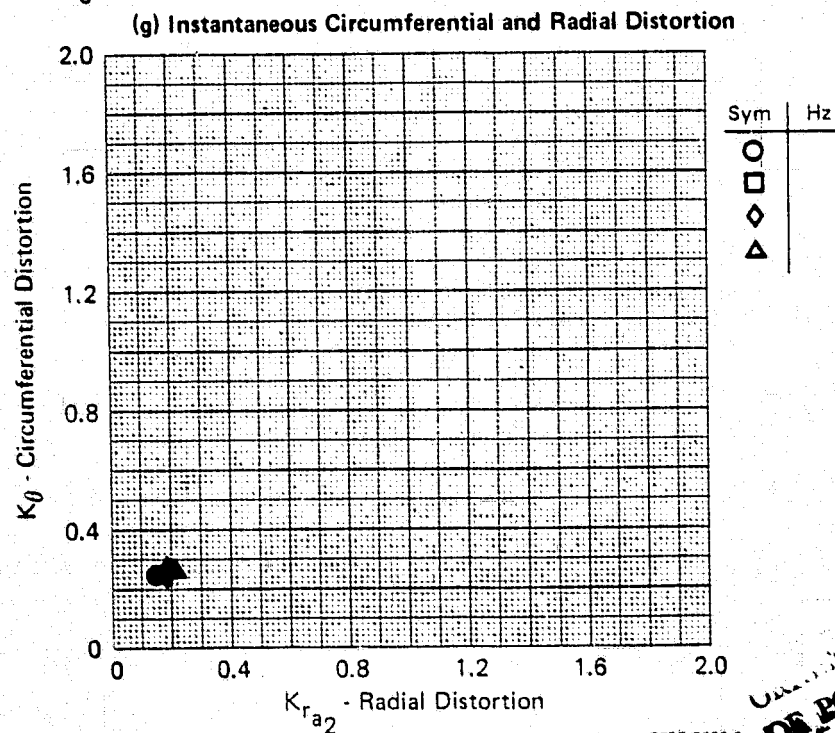
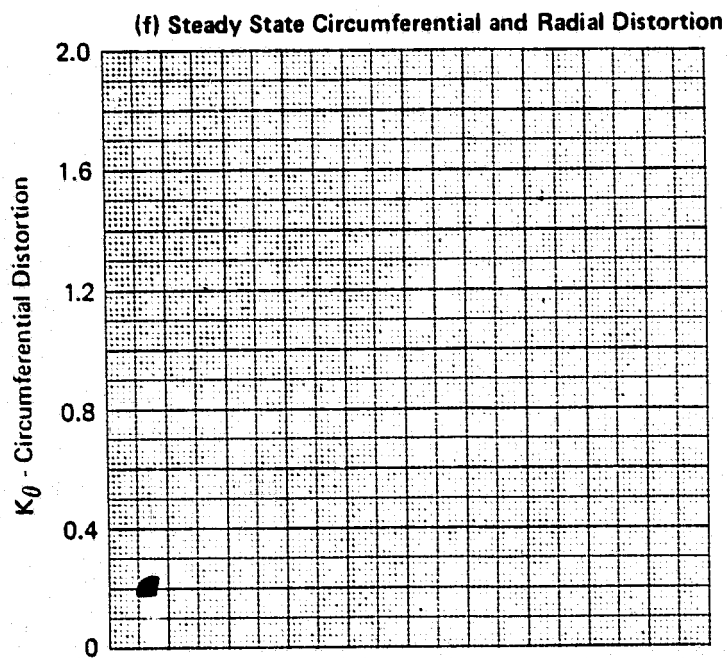
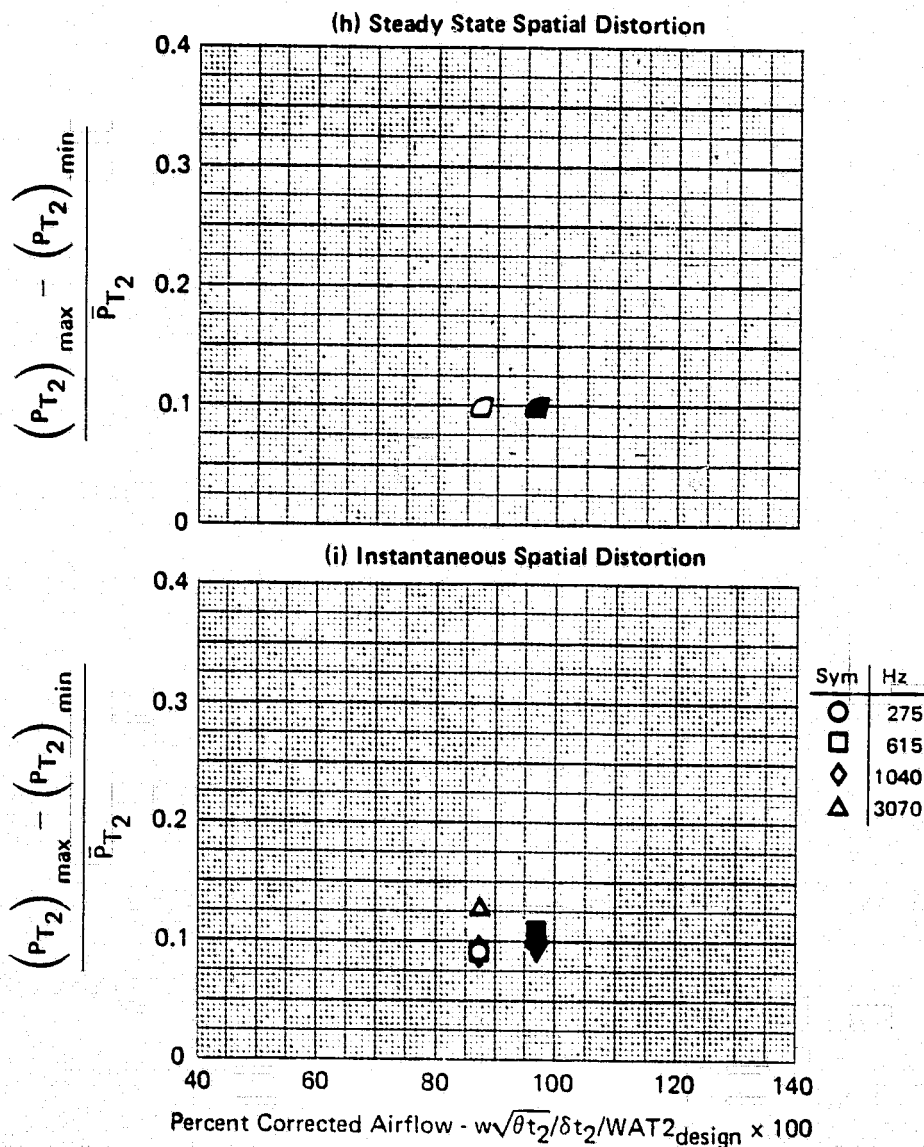


FIGURE G-43 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 96.9 %

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SERIES VIII - NASA Data Study
 Part/Point - 206/5, Ident 43
 RHO DELTA3 BYPASS CIVV
 -2.0 13.5 0.0 -12.00



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FIGURE G-43 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 96.9\%$

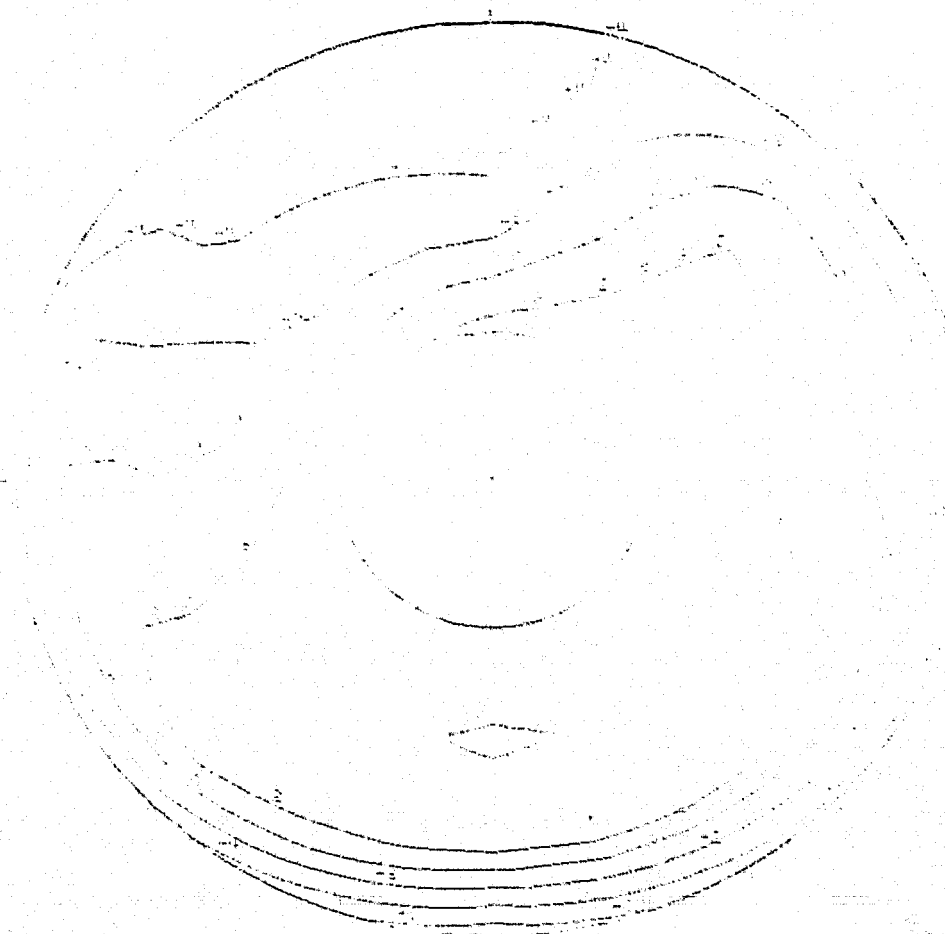
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SERIES VIII - NCEP DATA STUDY

NOTE: SUBSEQUENT TO TEST 43
THE INLET PROFILE TIME WAS AT 1.000

PI	PI.P3	KTHETA	KPA3	BPAA3	KPA3	KPA3	KBP3	OS
32.45 (4.706)	1.000	0.133	0.127	0.217	0.418	0.291	0.212	0.097

43 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 32.45 kPa (4.706 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-43 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 96.9 %

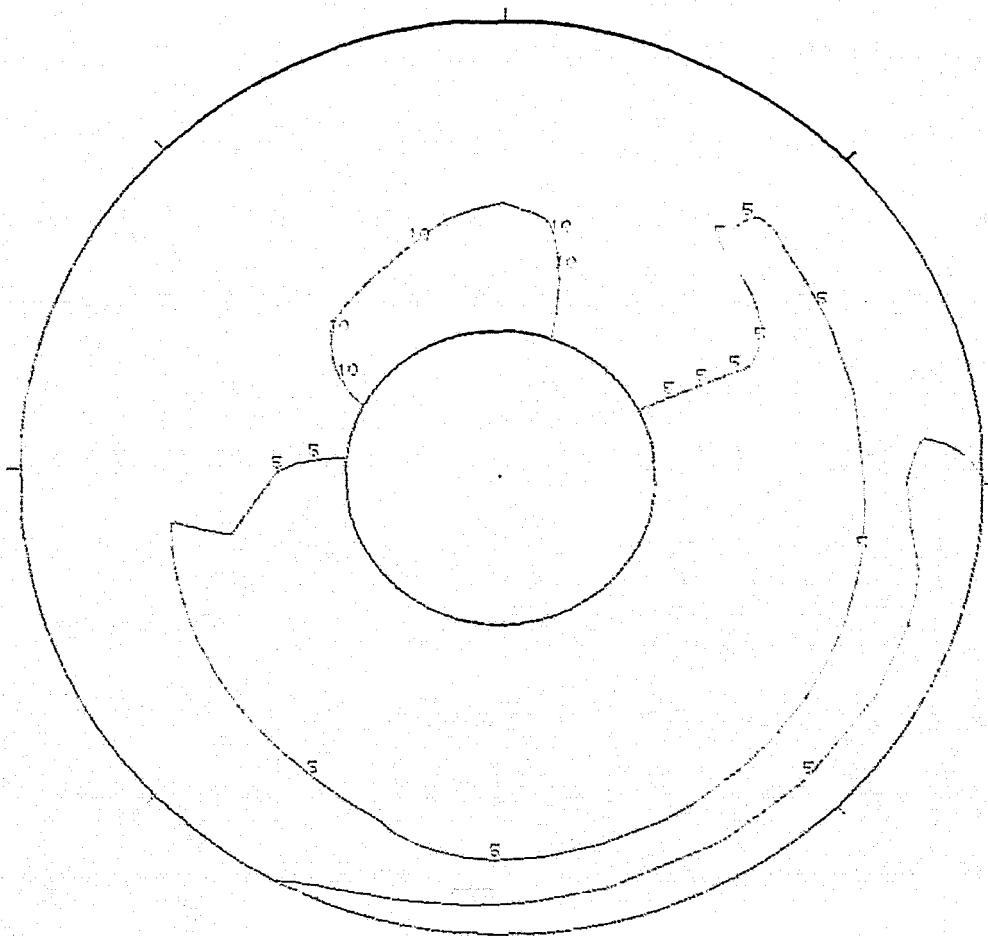
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 206 / 5 IDENT. **43**
 THE SEGMENT START TIME WAS AT 3:30: 5.045

MACH 1.6	ALPHA -4	BETA 0	RHO -2.0	DELTA3 13.5	BYPASS 0.0	WAT2 96.9%	CIVV -12.0
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43(k) Turbulence Contour 275 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
 AVERAGE TURBULENCE = .00547

FIGURE G-43 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 96.9 %

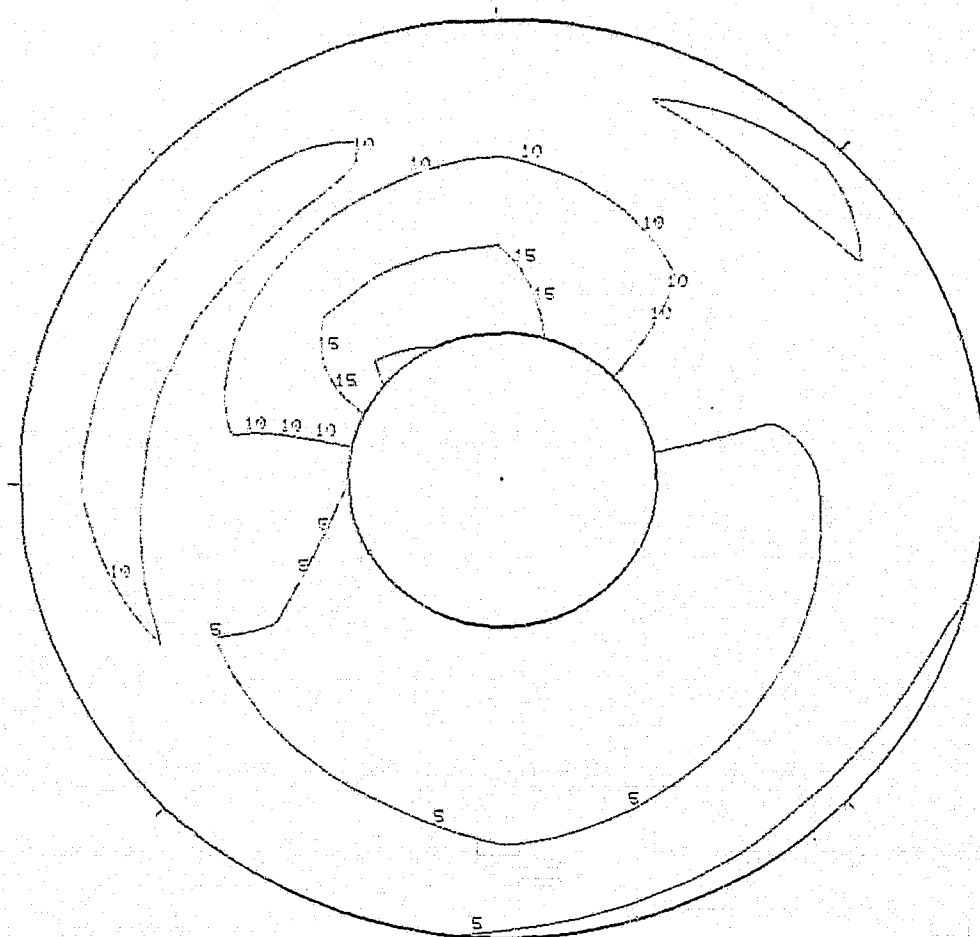
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SERIES VIII - NACA DATA STUDY

DATA POINT POINT 208 / 5 WENT. 43
THE SEGMENT START TIME WAS AT 8:20: 5.051

MACH	ALPHA	BETA	PHI	DELTA	WAT2	WAT2	CIW
1.6	-4.0	0.6	-2.0	10.0	96.9	96.9	-12.9

43(I) Turbulence Contour 615 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00769

FIGURE G-43 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.6$, WAT2 = 96.9 %

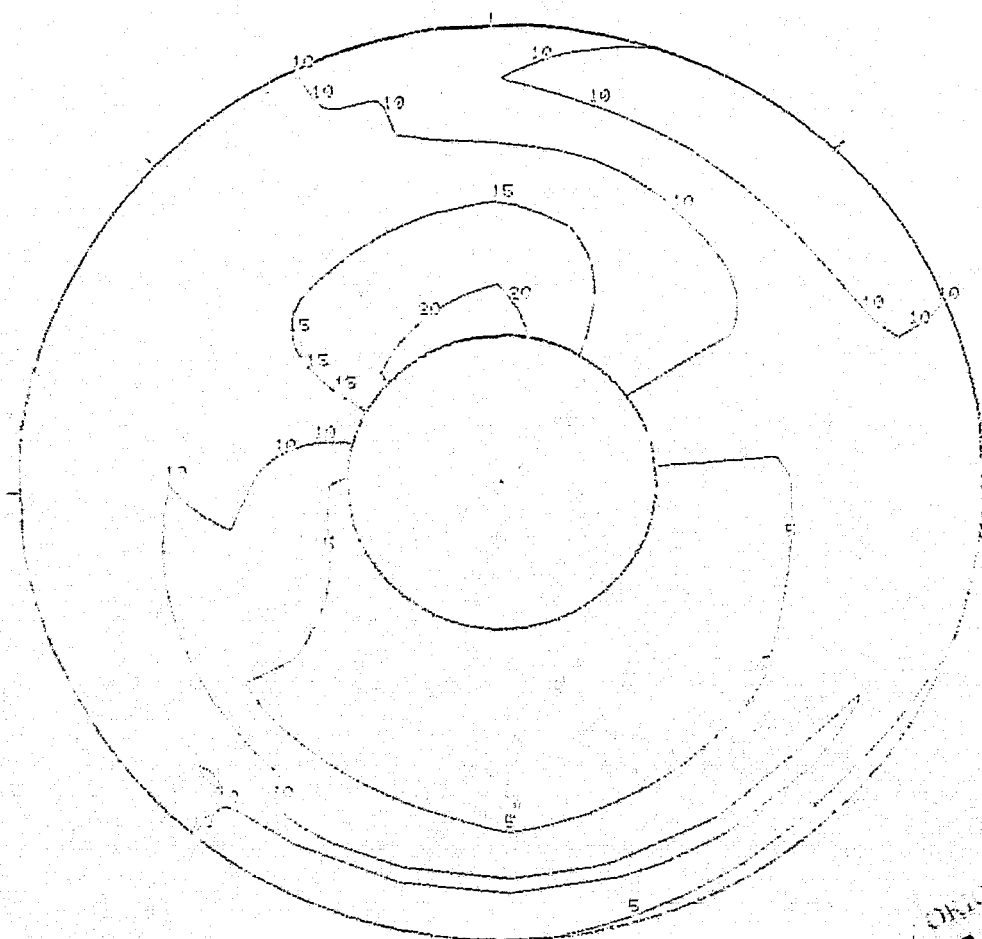
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 205 / 5 IDENT. **43**
 THE SEGMENT START TIME WAS AT 3:20: 5.045

MACH 1.6	ALPHA -4	BETA 0	PHI -2.0	DELTA3 13.5	BYPASS 0.0	WAT2 96.9%	CIWV -12.9
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43(m) Turbulence Contour 1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
 AVERAGE TURBULENCE = .00914

FIGURE G-43 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 96.9 %

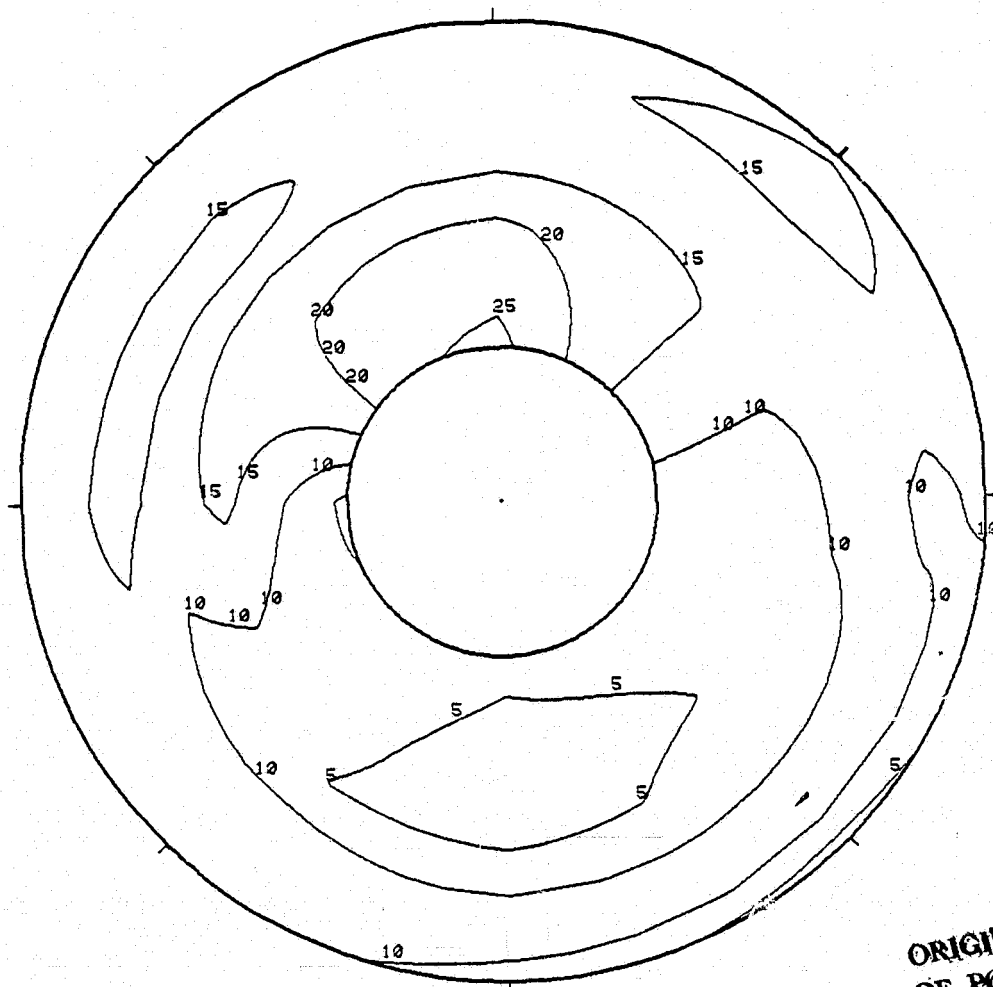
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 206 / 5 IDENT. 43
THE SEGMENT START TIME WAS AT 3:30: 5.045

MACH 1.6 ALPHA -4.0 BETA 0.0 RHO -2.0 DELTA3 13.5 BYPASS 0.0 WAT2 96.9% CIVV -12.0

43 (n) Turbulence Contour 3070 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01182

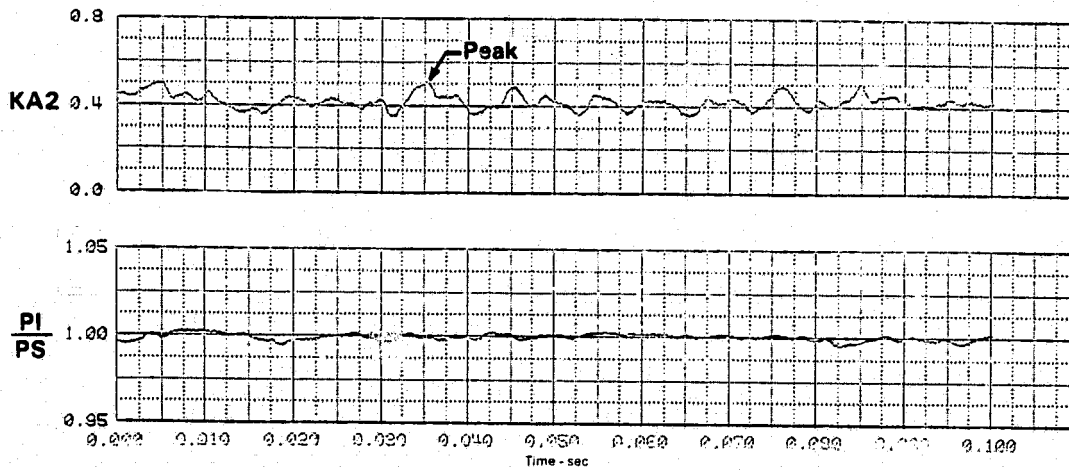
FIGURE G-43 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 96.9%

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 306 / 5 IDENT. 43
THE SEGMENT START TIME WAS AT 3:30: 5.045

MACH 1.3	ALPHA -4	BETA 0	RHO -2.0	DELTA2 13.5	BYPASS 0.0	WAT2 96.9%	QIVV -12.0
32.42 (4.702)	PI/PS 0.999	KTHETA 0.245	KQ02 0.192	BKQ12 0.7311	KQ2 0.900	KQ1 0.991	KQ3 0.992
							0.102

43(o) Time History Plots 275 Hz



PEAK AT TIME = 0.035145 SECONDS

FIGURE G-43 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 96.9%

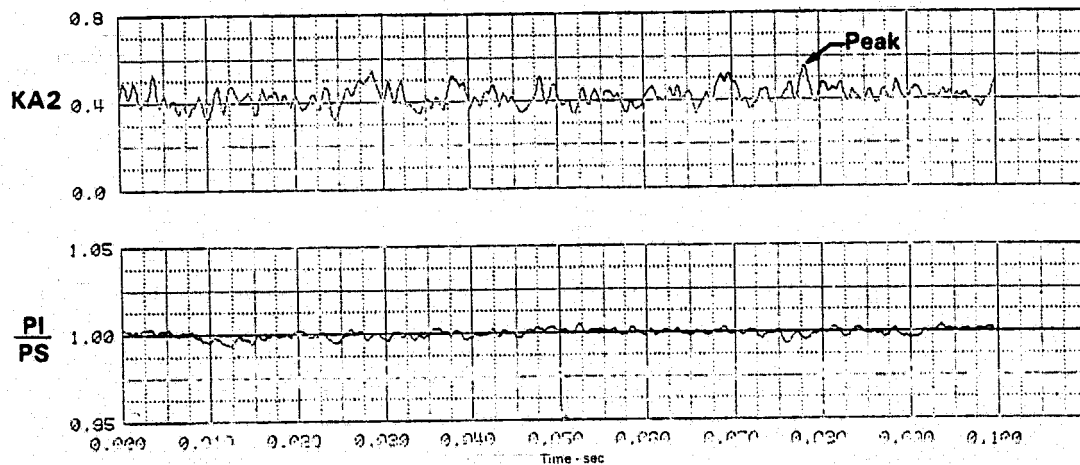
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 203 / 5 IDENT. 43
THE SEGMENT START TIME WAS AT 2:30: 5.001

MOCH 1.5	ALPHA -4.0	BETA 0	PHI -2.0	DELTA2 75.5	WAT2 96.9%	Q2 0.037
32.32 (4.687)	PI/PS 0.99	KA2 0.4	KA1 0.4	KA3 0.4	KA4 0.4	KA5 0.4

43(p) Time History Plots 615 Hz



PEAK AT TIME = 0.078210 SECONDS

FIGURE G-43 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 96.9%

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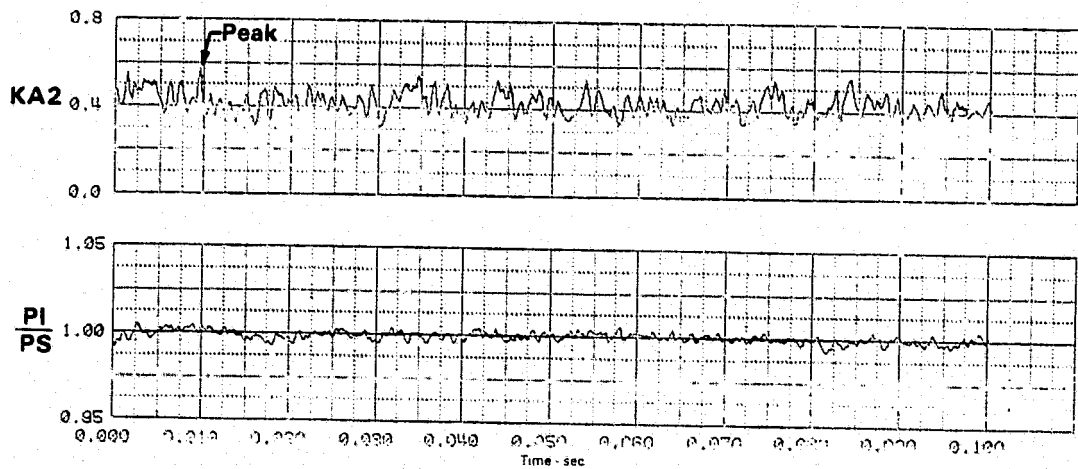
SERIES VIII - NACA DATA STUDY

DATA PART/POINT 006 / 5 IDENT. 43
THE SEGMENT START TIME WAS AT 0:00: 5.115

MACH	ALPHA	BETA	δ	DELTA	WAT2	WAT2	WAT2
1.6	-4.0	0.0	-2.0	19.3	96.9%	96.9%	96.9%

32.42 (4.702) 0.000 0.000 0.000 0.000 0.000 0.000 0.000

43(q) Time History Plots 1040 Hz



PEAK AT TIME = 0.009570 SECONDS

FIGURE G-43 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 96.9%

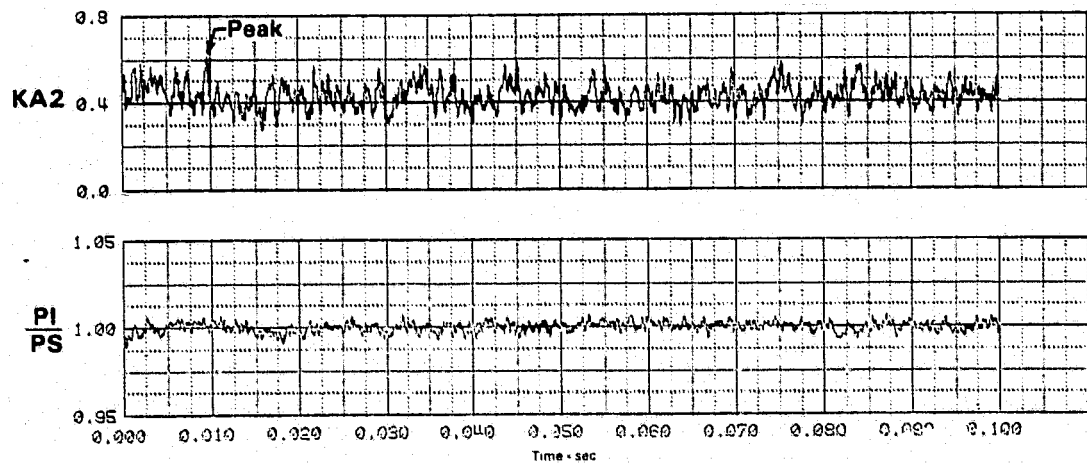
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 206 / 5 IDENT. 43
THE SEGMENT START TIME WAS AT 3:30: 5.045

MACH 1.6	ALPHA -4	BETA 0	RHO -2.0	DELTA3 13.5	BYPASS 0.0	WAT2 96.9%	CIVV -12.0
PI 32.41 (4.700)	PI/PS 0.999	KTHETA 0.257	KRA2 0.297	BKRA2 0.355	KR2 0.612	KC2 0.311	KOSP 0.325
							D2 0.105

43(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.009535 SECONDS

FIGURE G-43 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 96.9\%$

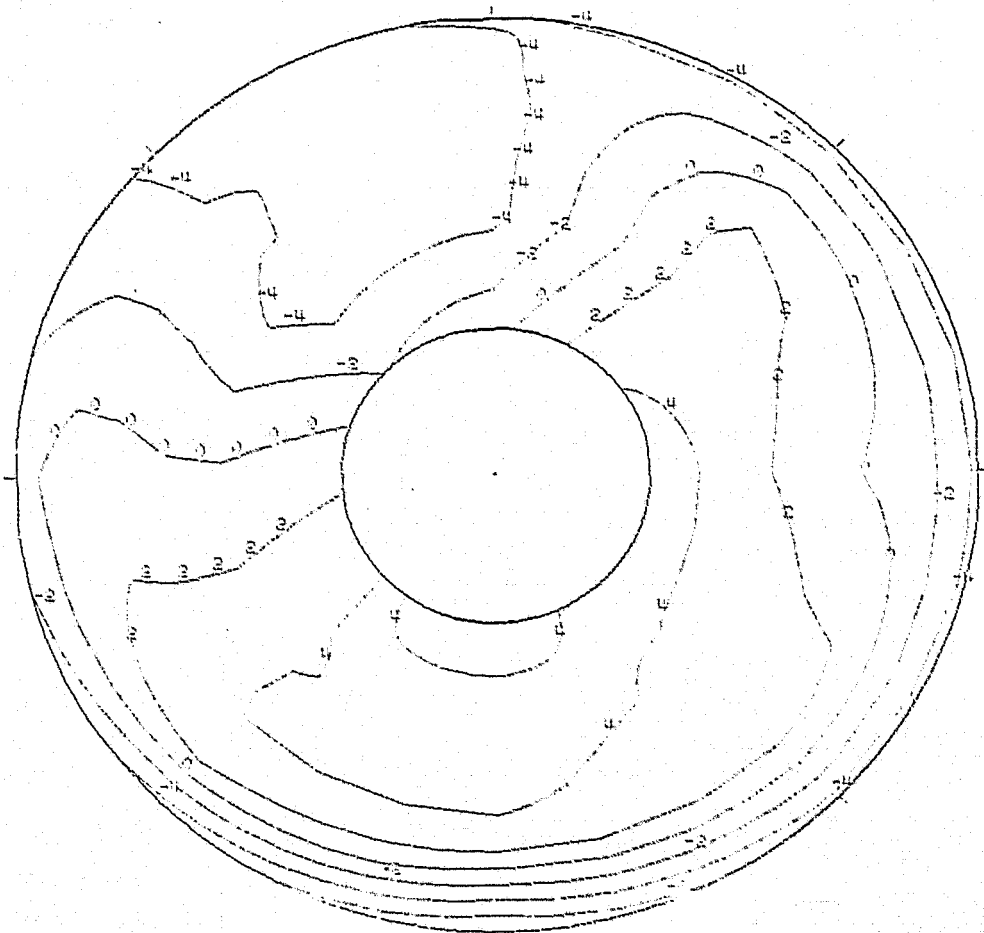
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SERIES VIII - NASA DATA STUDY

DATA PART: POINT 206 / 5 IDENT. 43
THE SEGMENT START TIME WAS AT 2:30: 5.045

MACH	ALPHA	BETA	PHI	DELTA2	WAT2	WAT2	QIVV
1.3	-4	0	-2.0	13.5	0.0	96.9%	-12.0
32.42 (4.702)	1.333	1.143	0.143	1.281	0.506	0.401	0.202
							0.109

**43 (s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
275 Hz**



MEAN FACE PRESSURE = 32.42 kPa (4.702 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.035145 SECONDS

FIGURE G-43 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, $WAT2 = 96.9\%$

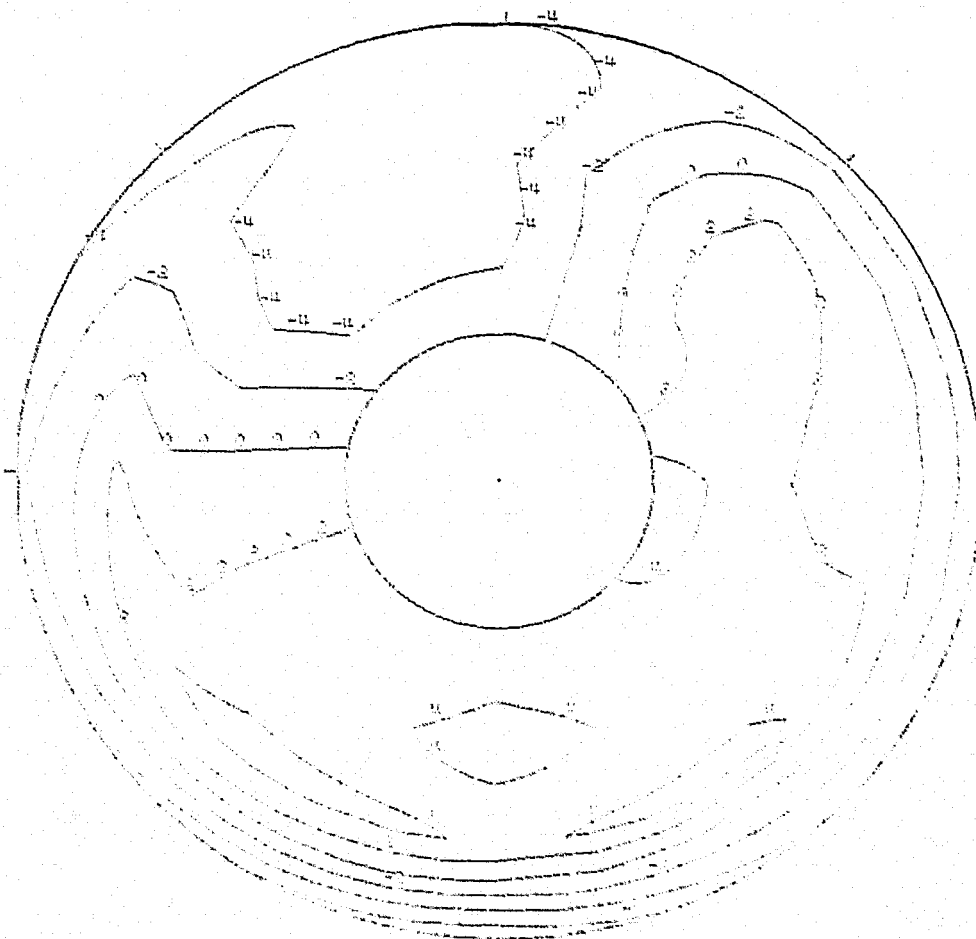
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 206 / 5 IDENT. 43
THE SEGMENT START TIME WAS AT 2:30: 5.051

MACH 1.5	ALPHA -4.0	BETA 0.0	PHI -2.0	DELTA2 13.923	BYPASS 0.0	WAT2 96.9%	CIVV -12.0
P1 32.32 (4.687)	BIAP2 0.133	KTHETA 0.153	KPA2 0.172	BKPA2 0.133	KQ2 0.132	KQ2 0.137	KQSP 0.134
							CS 0.107

43 (t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
615 Hz



MEAN FACE PRESSURE = 32.32 kPa (4.687 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.078210 SECONDS

FIGURE G-43 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 96.9 %

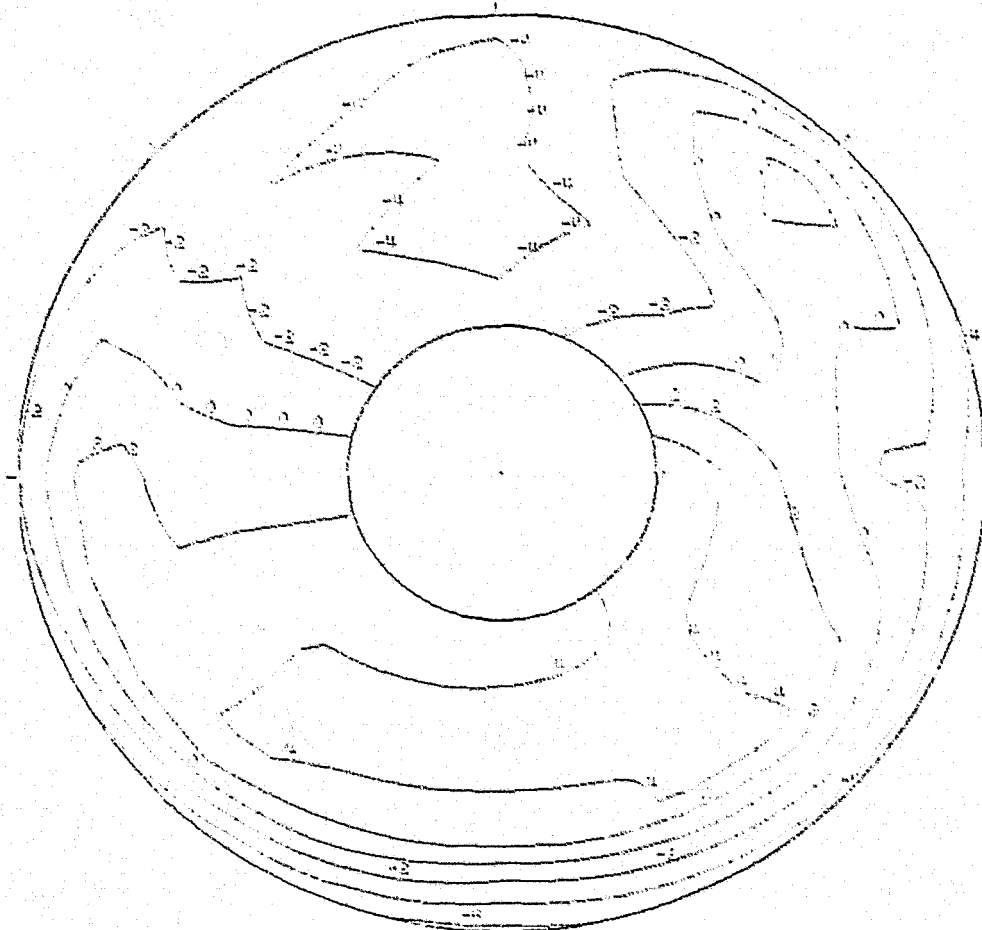
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SERIES VIII - NROD DATA STUDY

DATA POINT POINT NO. 15 IDENT. 43
THE INSTANT. START TIME WAS AT 0.009570 SECS

WAT2	ALPHA	BETA	M0	WAT2	ALPHA	BETA	M0	WAT2	ALPHA	BETA	M0
32.42 (4.702)	34.83	37.57	40.2	43.1	46.1	49.1	52.1	55.1	58.1	61.1	64.1

43(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
1040 Hz



MEAN FACE PRESSURE = 32.42 kPa (4.702 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.009570 SECONDS

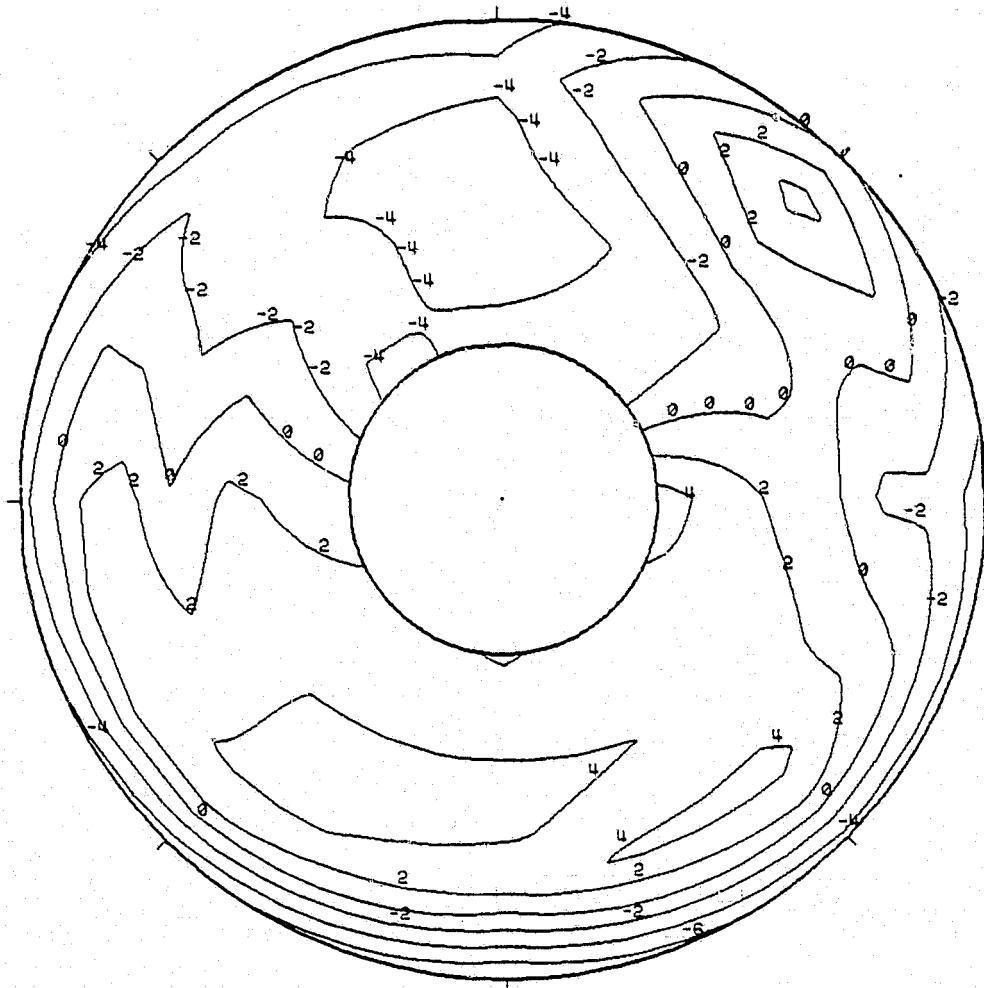
FIGURE G-43 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 96.9 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 206 / 5 IDENT. 43
THE SEGMENT START TIME WAS AT 3:30: 5.045

MACH 1.6	ALPHA -4	BETA 0	RHO -2.0	DELTA3 13.5	BYPASS 0.0	WAT2 96.9%	CIVV -12.0
P1 32.41 (4.700)	PI/PS 0.999	KTHETA 0.257	KRA2 0.207	BKRA2 0.355	KA2 0.612	KC2 0.311	KOSP 0.325
							D2 0.105

**43 (v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
3070 Hz**



MEAN FACE PRESSURE = 32.41 kPa (4.700 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.009585 SECONDS

**FIGURE G-43 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.6$, $\alpha = -4.0$, $\beta = 0.0$, WAT2 = 96.9 %**

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FLIGHT - NASA Data Study
 Part./Point - 414/2, Ident 44
 RHO DELTA3 BYPASS CIVV
 -2.3 13.7 0.0 -20.60

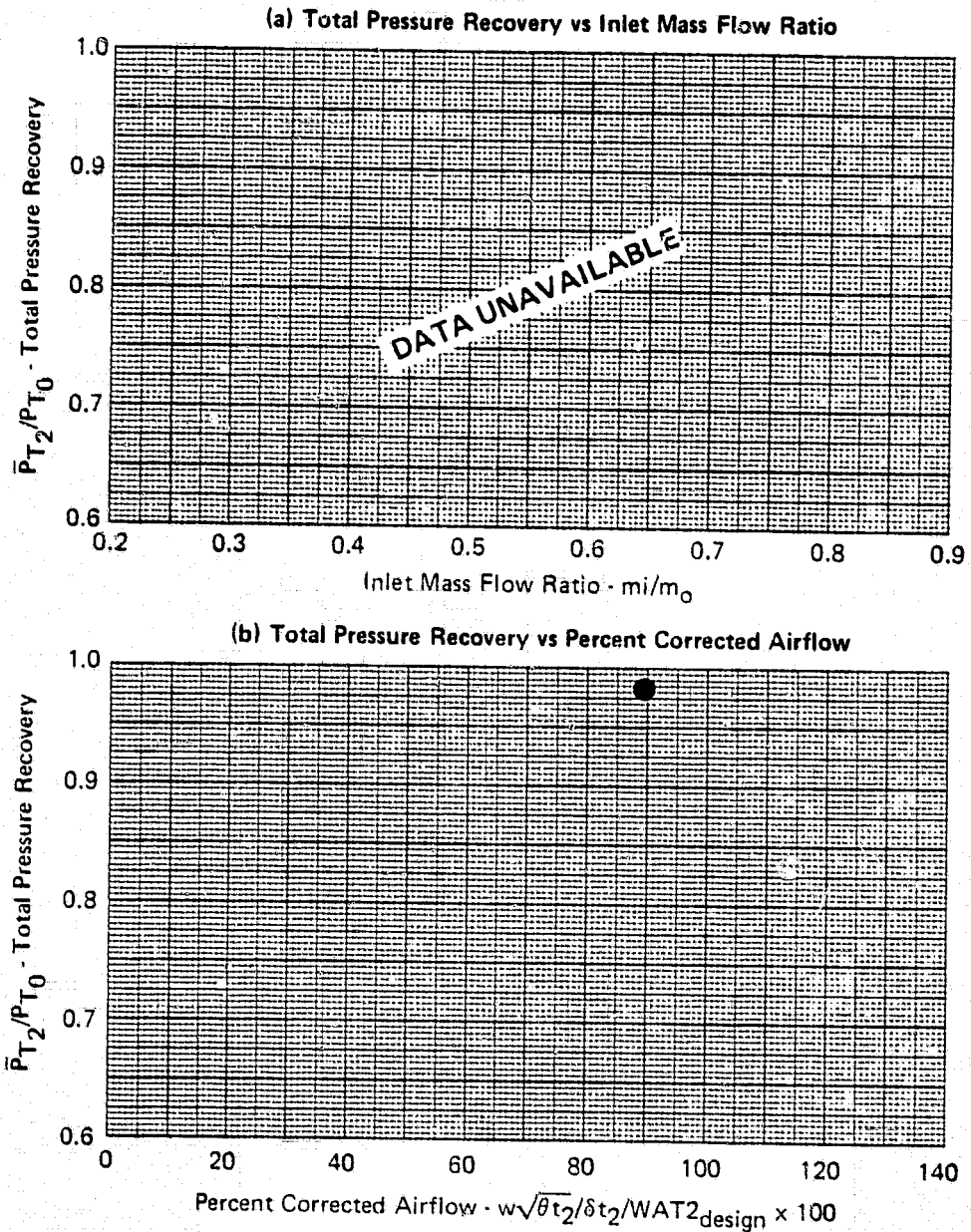
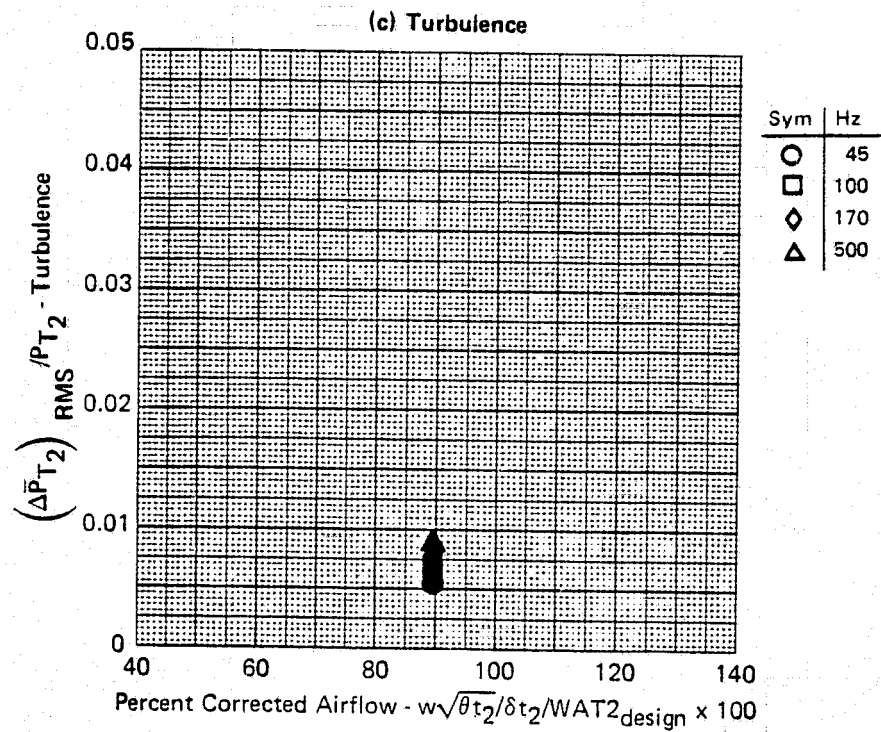


FIGURE G-44
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57, \alpha = -3.6, \beta = 0.7, WAT2 = 89.3 \%$

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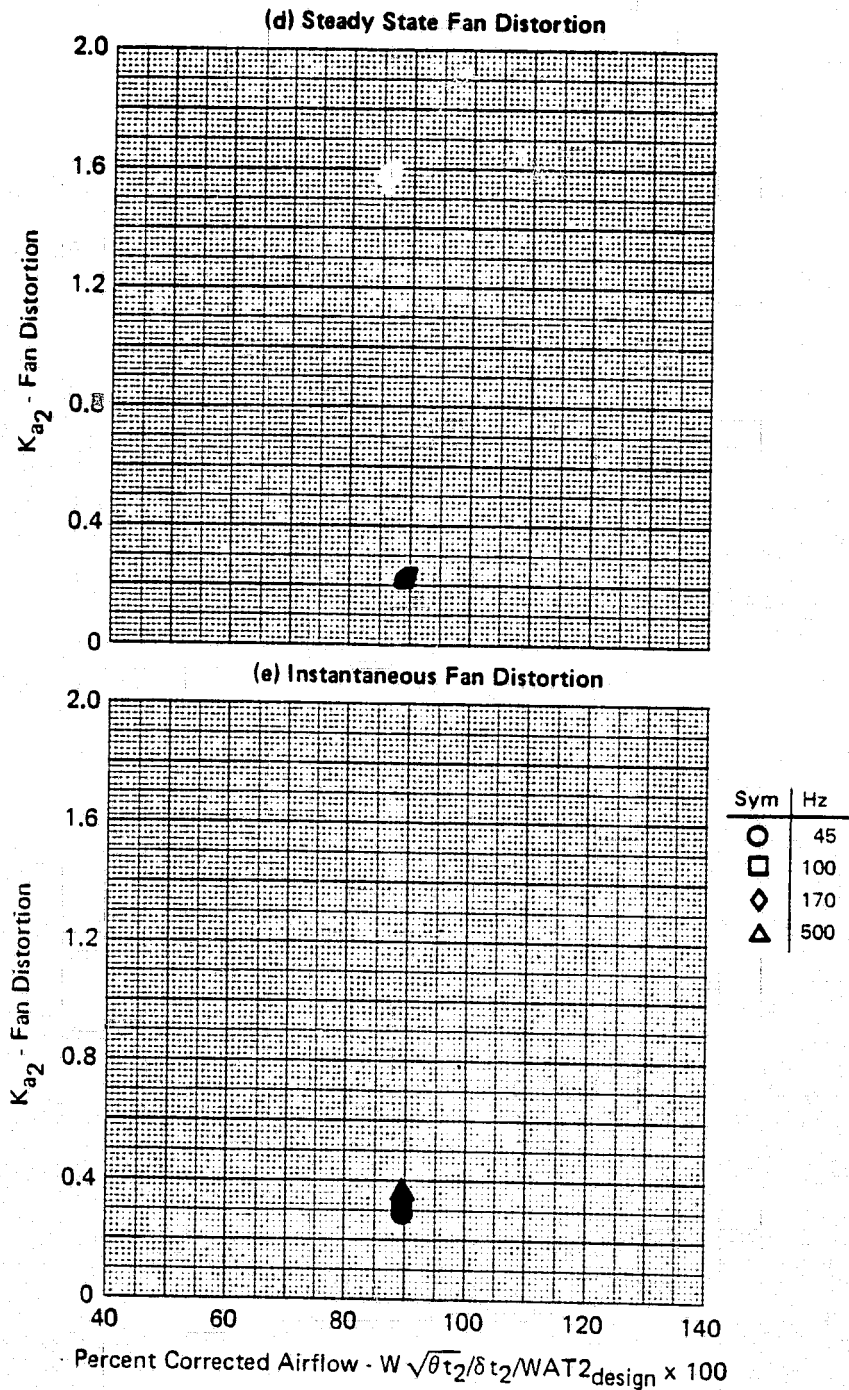
FLIGHT - NASA Data Study
 Part/Point - 414/2, Ident 44
 RHO DELTA3 BYPASS CIVV
 -2.3 13.7 0.0 -20.60



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FIGURE G-44 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.57, \alpha = -3.6, \beta = 0.7, WAT2 = 89.3\%$

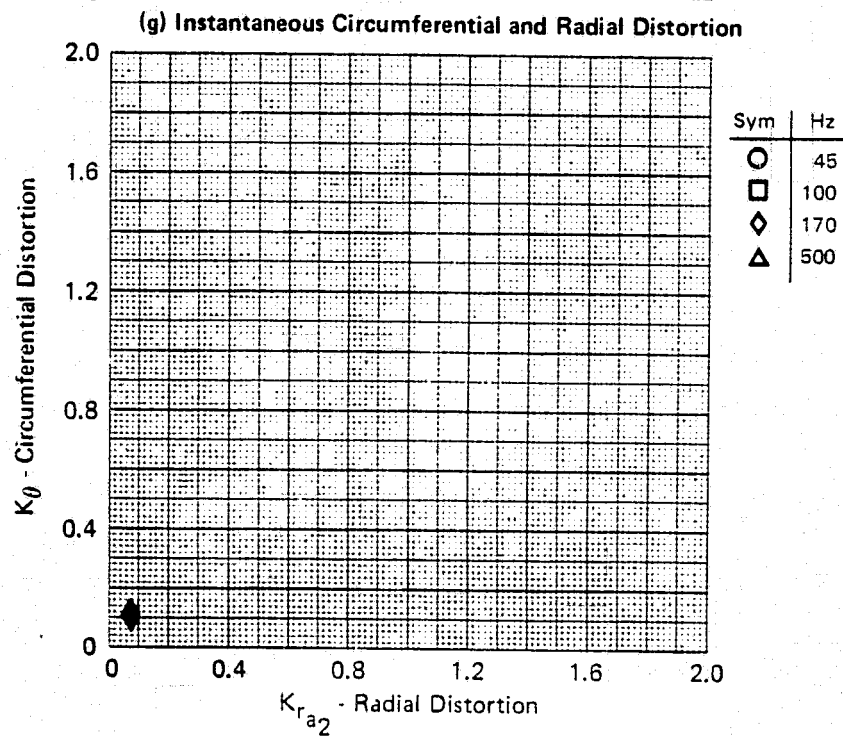
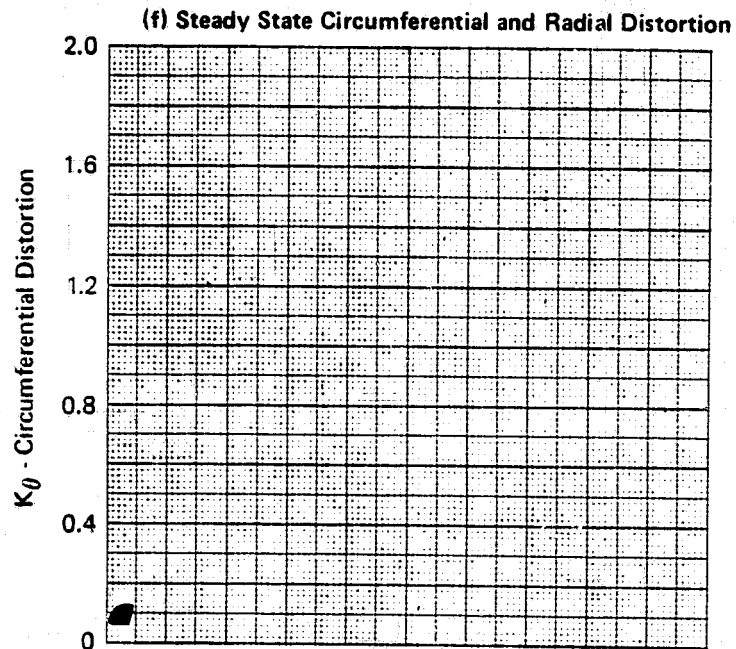
FLIGHT - NASA Data Study
 Part/Point - 414/2, Ident 44
 RHO DELTA3 BYPASS CIVV
 -2.3 13.7 0.0 -20.60



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FIGURE G-44 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57$, $\alpha = -3.6$, $\beta = 0.7$, $WAT2 = 89.3\%$

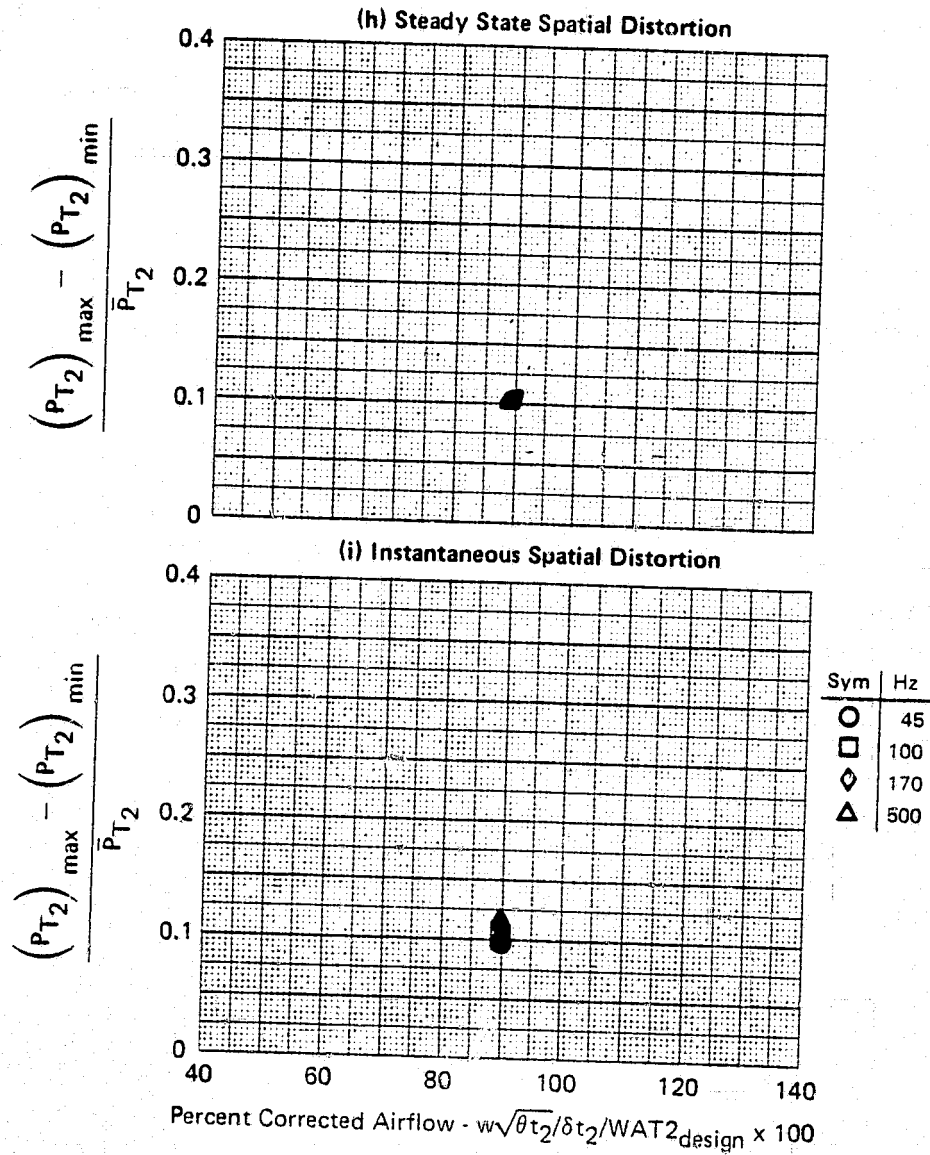
FLIGHT - NASA Data Study
 Part/Point - 414/2, Ident 44
 RHO DELTA3 BYPASS CIVV
 -2.3 13.7 0.0 -20.60



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FIGURE G-44 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57$, $\alpha = -3.6$, $\beta = 0.7$, WAT2 = 89.3 %

FLIGHT - NASA Data Study
 Part/Point - 414/2, Ident 44
 RHO DELTA3 BYPASS CIVV
 -2.3 13.7 0.0 -20.60



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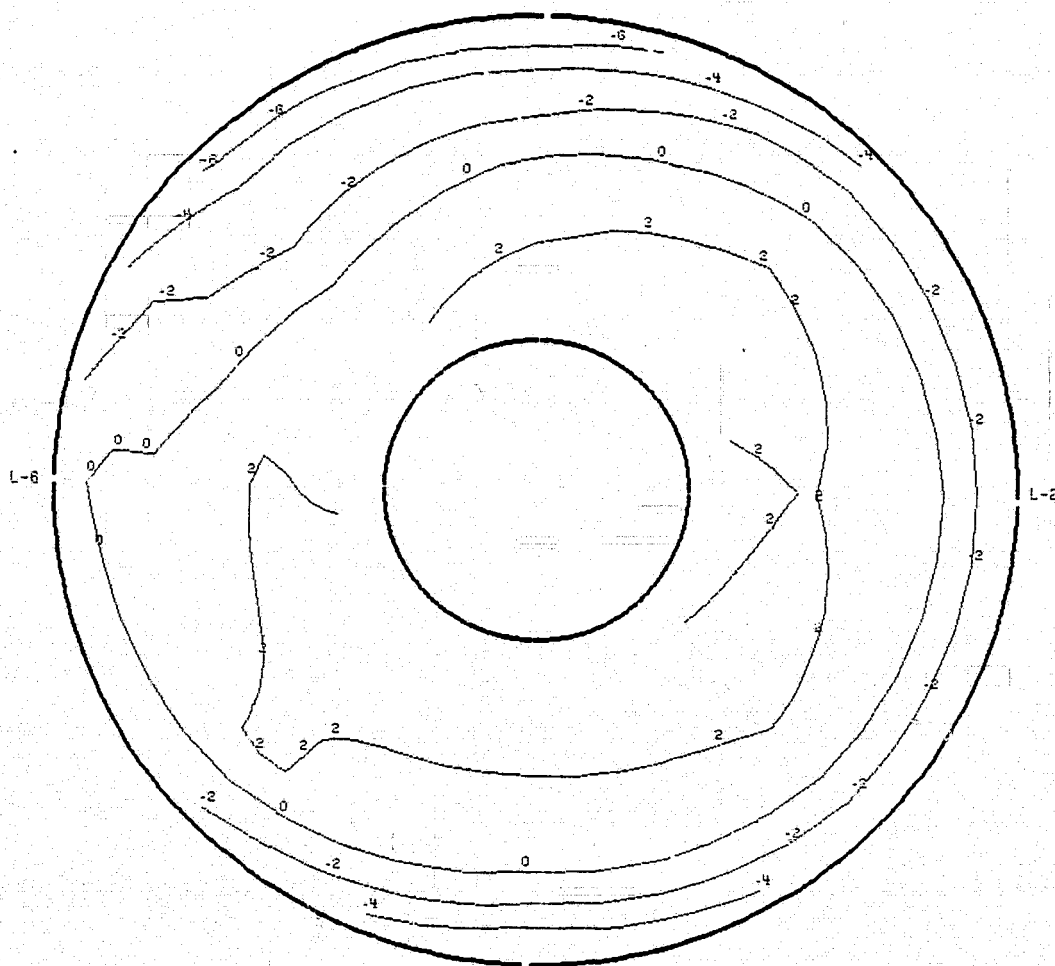
FIGURE G-44 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.57$, $\alpha = -3.6$, $\beta = 0.7$, $WAT2 = 89.3\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT.44
THE SEGMENT START TIME WAS AT 20:16:46.905

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.6	0.7	17156(56286)	-2.3	13.7	0.0	89.3%	-20.60
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	K0SP	D2
32.94 (4.778)	1.0	.0881	.0531	.1264	.2149	.0703	—	.1043

44 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 32.94 kPa (4.778 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-44 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57$, $\alpha = -3.6$, $\beta = 0.7$, $WAT2 = 89.3\%$

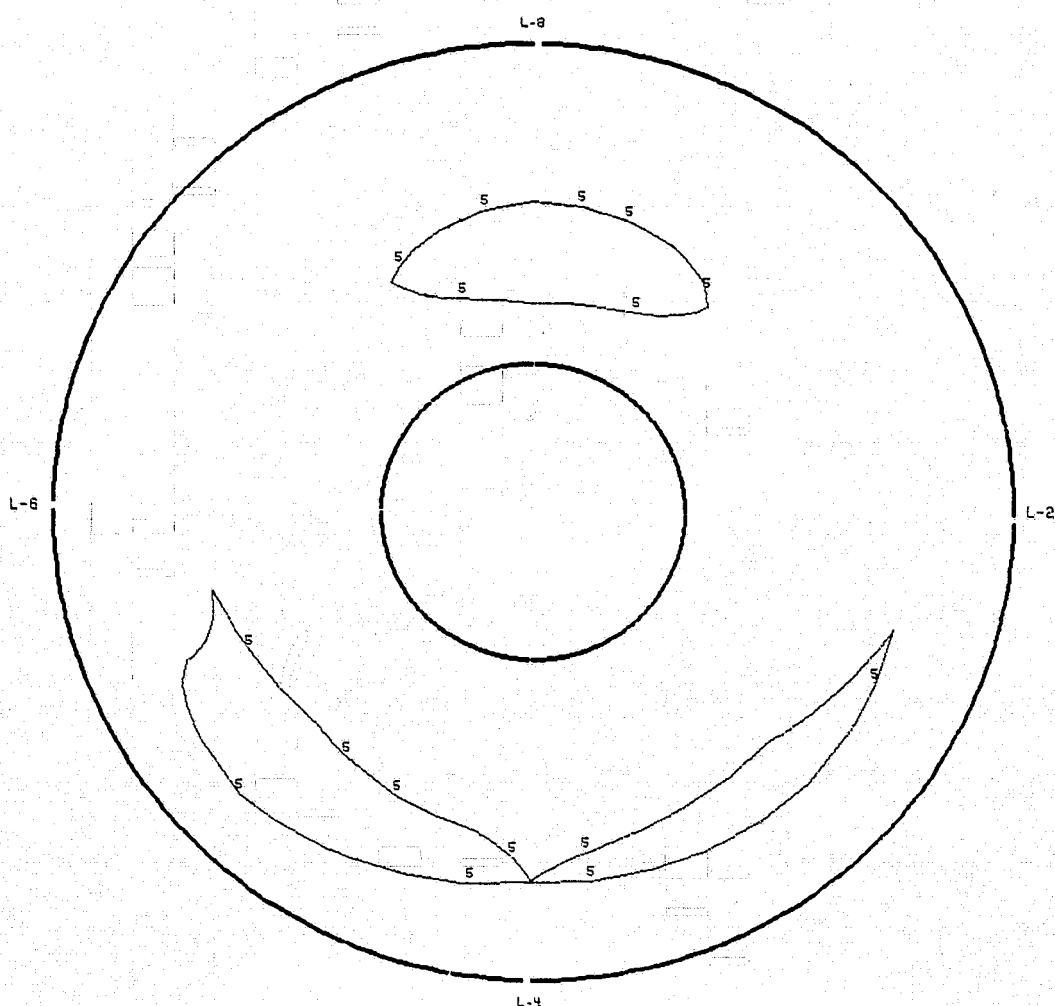
C-4

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT. 44
THE SEGMENT START TIME WAS AT 20: 16: 46.906

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.7	0.7	17156 (56286)	-2.3	13.7	0.0	89.3%	-20.607

44(k) Turbulence Contour
45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0057

FIGURE G-44 (Continued)

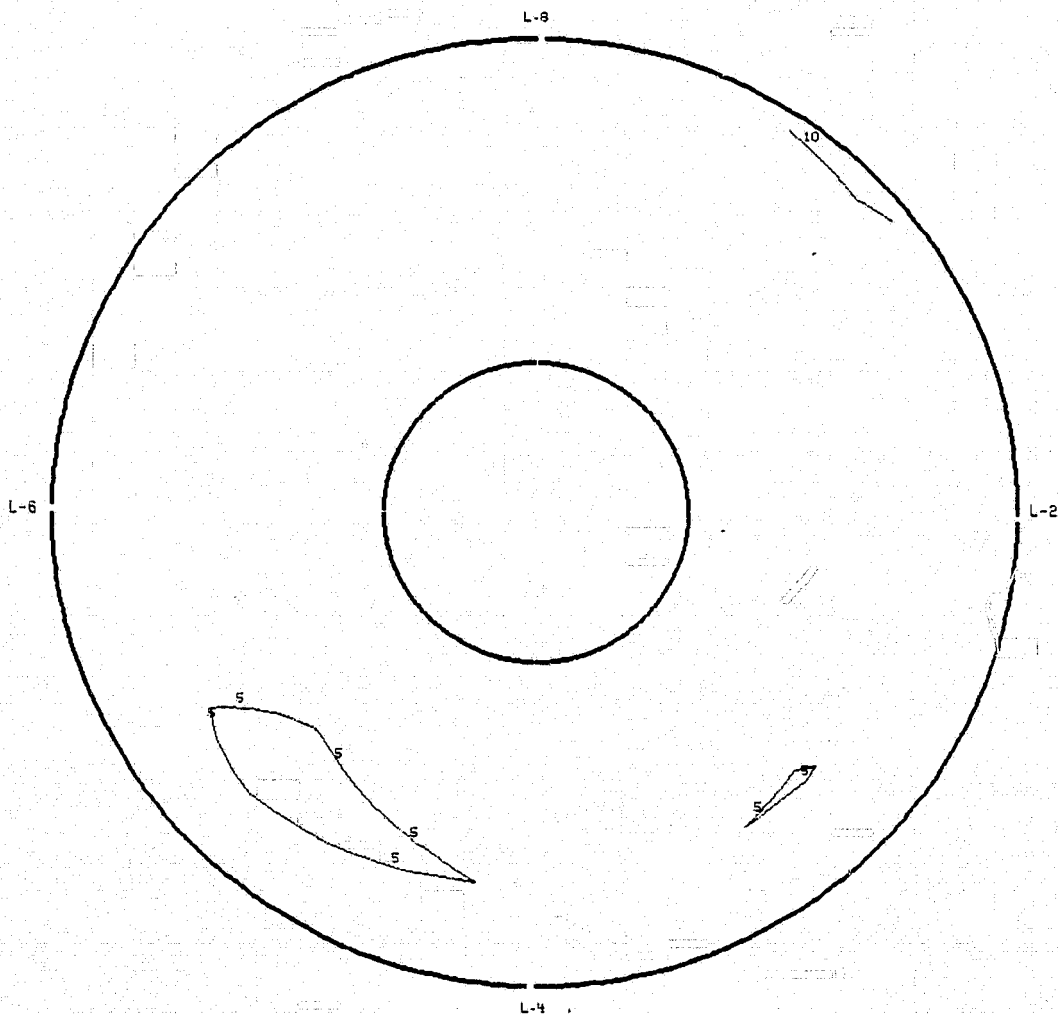
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57$, $\alpha = -3.7$, $\beta = 0.7$, $WAT2 = 89.3\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT. 44
THE SEGMENT START TIME WAS AT 20:16:46.906

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.6	0.8	17166 (56286)	-2.3	13.7	0.0	89.3%	-20.884

44 (I) Turbulence Contour
100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0065

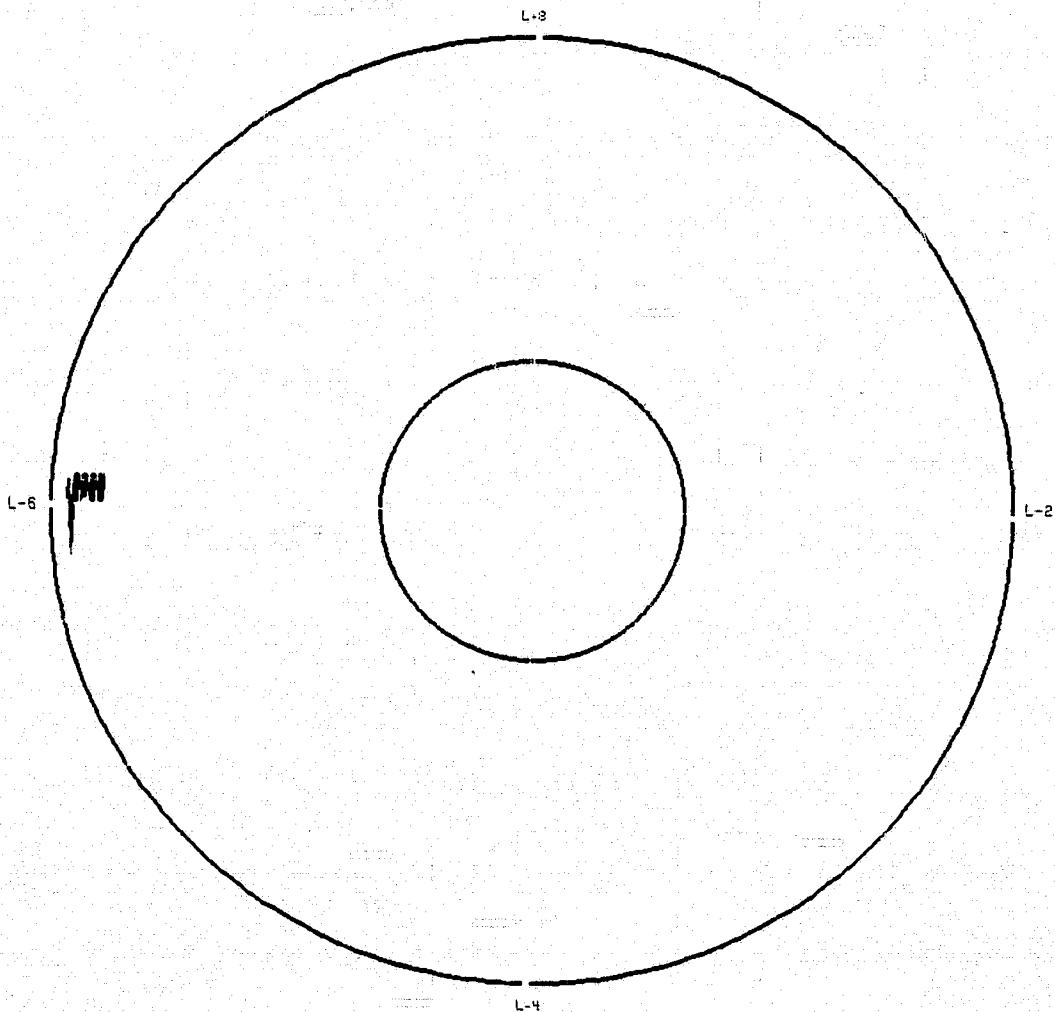
FIGURE G-44 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57$, $\alpha = -3.6$, $\beta = 0.8$, $WAT2 = 89.3\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT.44
THE SEGMENT START TIME WAS AT 20:16:46.905

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.6	0.7	17156(56286)	-2.3	13.7	0.0	89.3%	-20.60

44(m) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0072

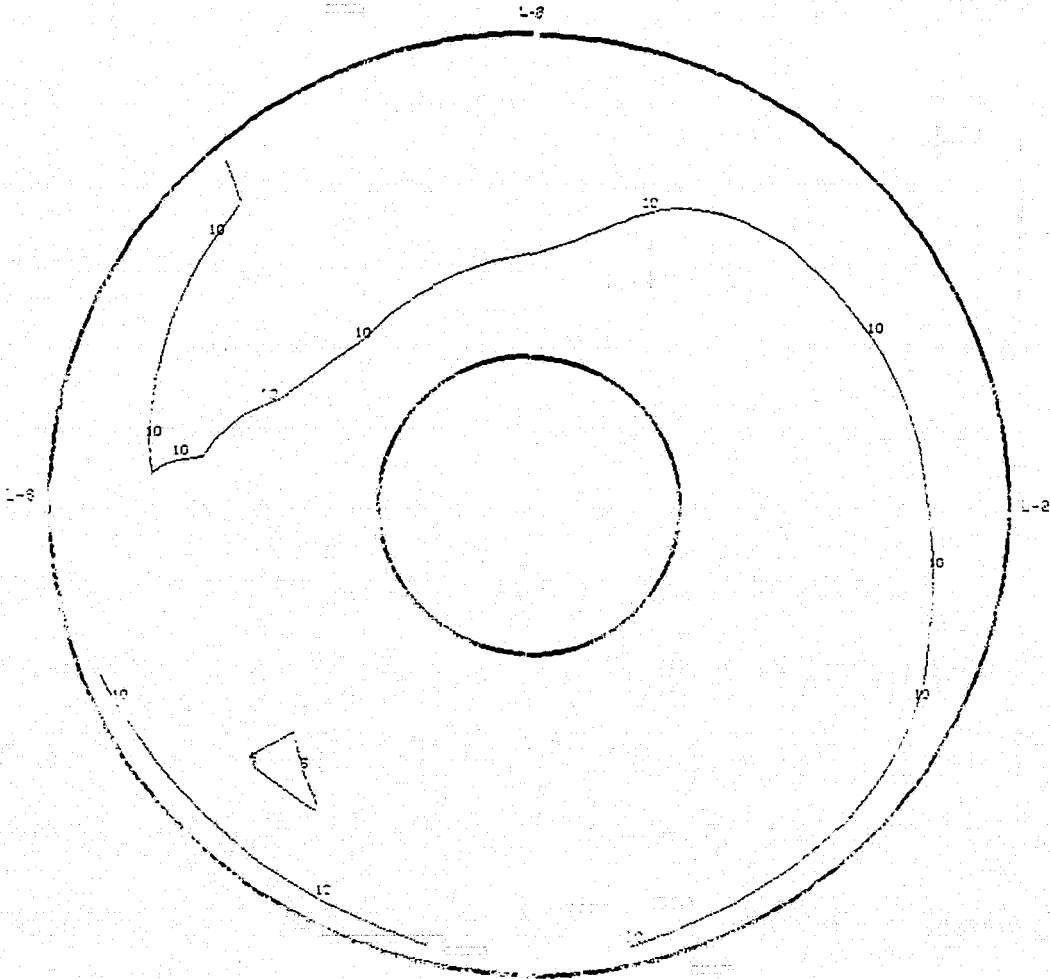
FIGURE G-44 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57$, $\alpha = -3.6$, $\beta = 0.7$, $WAT2 = 89.3\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT. 44
THE SEGMENT START TIME WAS AT 20:18:46.908

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.6	0.8	17156 (56286)	-2.3	13.7	0.0	89.3%	-20.884

44 (n) Turbulence Contour
500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0086

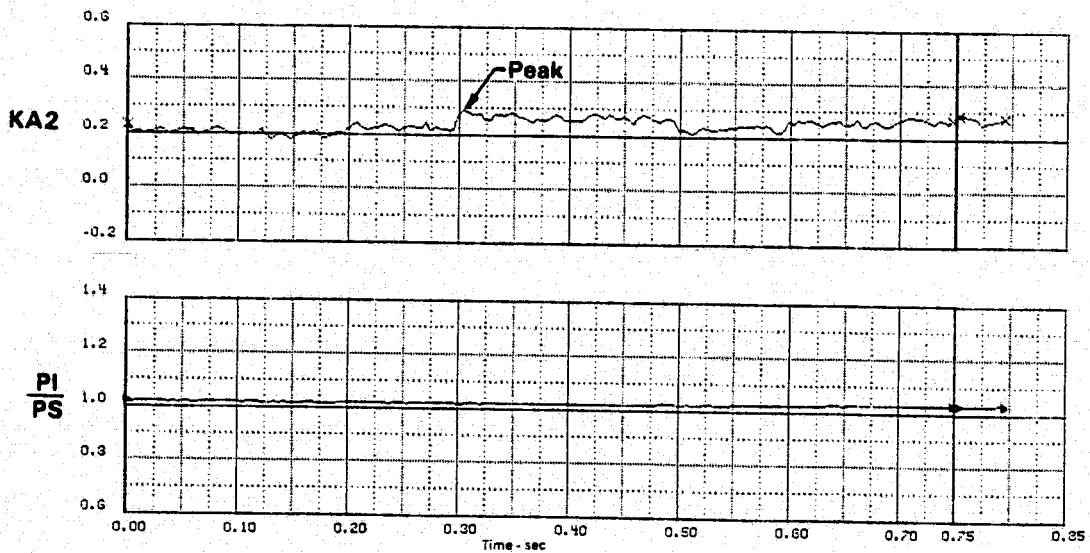
FIGURE G-44 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57$, $\alpha = -3.6$, $\beta = 0.8$, $WAT2 = 89.3\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT. 44
THE SEGMENT START TIME WAS AT 20:16: 46.908

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.7	0.7	17163 (56308)	-2.3	13.7	0.0	89.3%	-20.607
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
33.23 (4.82)	1.0169	0.1148	0.0726	0.1750	0.2900	0.1457	0.0969	0.1028

44 (o) Time History Plots
45 Hz



PEAK AT TIME = 0.30315 SECONDS

FIGURE G-44 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57$, $\alpha = -3.7$, $\beta = 0.7$, $WAT2 = 89.3\%$

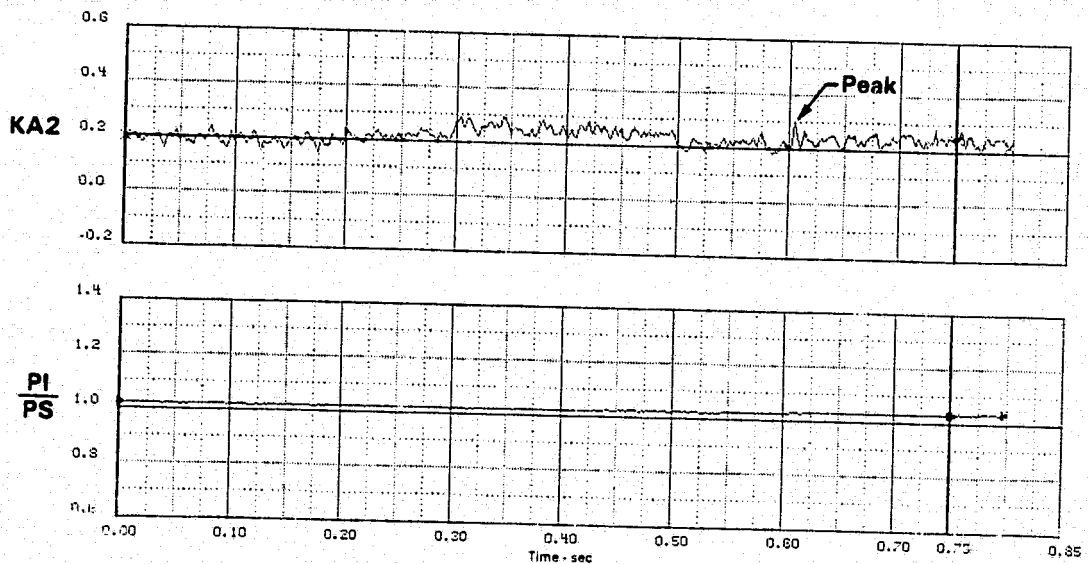
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT. 44
THE SEGMENT START TIME WAS AT 20:16:46.906

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.6	0.8	17117 (56158)	-2.3	13.7	0.0	89.3%	-20.884
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	ID2
33.92 (4.92)	1.0269	0.1154	0.0747	0.1815	0.2970	0.1833	0.1041	0.0969

44(p) Time History Plots
100 Hz



PEAK AT TIME = 0.60494 SECONDS

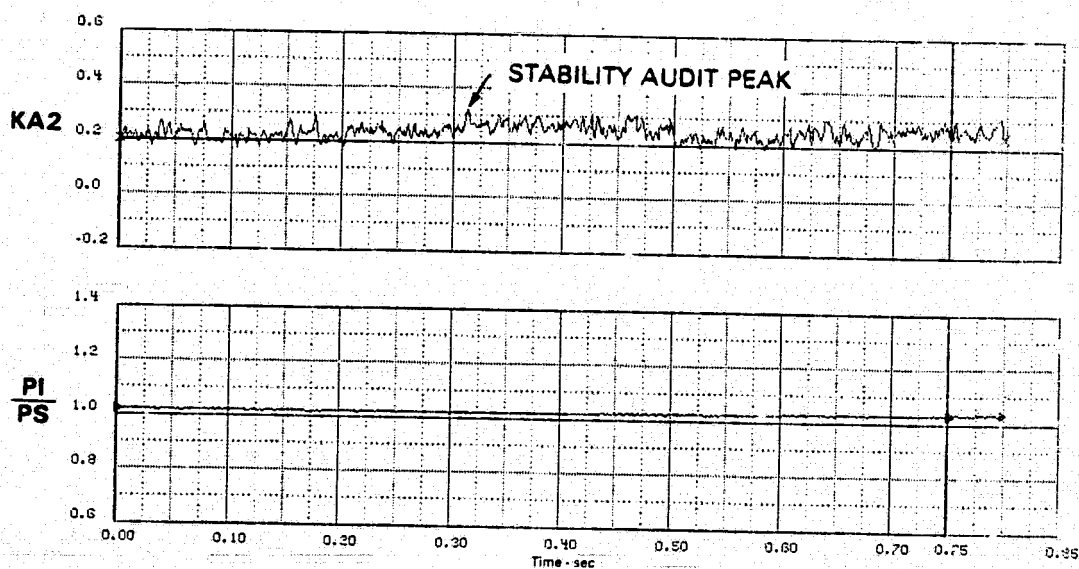
FIGURE G-44 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.57$, $\alpha = -3.6$, $\beta = 0.8$, $WAT2 = 89.3\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT. 44
THE SEGMENT START TIME WAS AT 20:16:47.604

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.6	0.7	17163(56308)	-2.3	13.7	0.0	89.3%	-20.60
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	O2
33.30(4.83)	1.0190	.1188	.0840	.200	.3188	.0725	.0843	.1142

44(q) Time History Plots
170 Hz



STABILITY AUDIT PEAK AT TIME = 0.3122 SECONDS

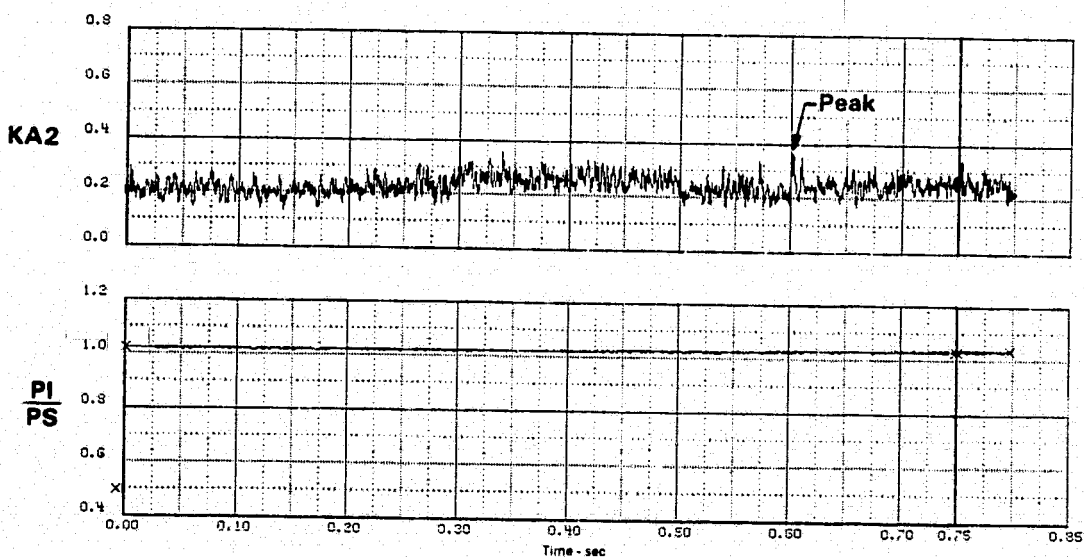
FIGURE G-44 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57$, $\alpha = -3.6$, $\beta = 0.7$, $WAT2 = 89.3\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT. 44
THE SEGMENT START TIME WAS AT 20:16: 46.906

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.6	0.8	17117 (56158)	-2.3	13.7	0.0	89.3%	-20.884
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
33.93 (4.921)	1.0271	0.1502	0.0889	0.2141	0.3644	0.1832	0.1241	0.0959

44(r) Time History Plots 500 Hz



PEAK AT TIME = 0.60161 SECONDS

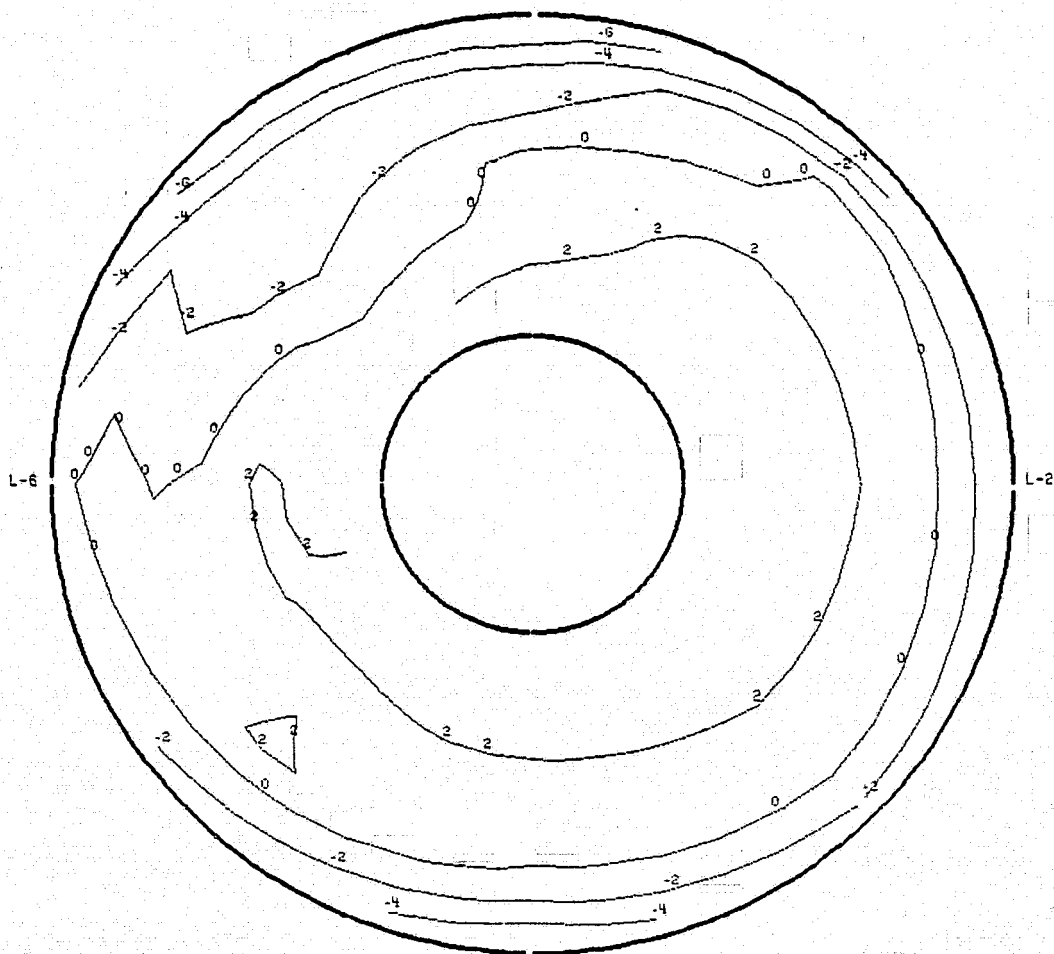
FIGURE G-44 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57$, $\alpha = -3.6$, $\beta = 0.8$, WAT2 = 89.3 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT. 44
THE SEGMENT START TIME WAS AT 20:16: 46.908

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.7	0.7	17163 (56308)	-2.3	13.7	0.0	89.3%	-20.607
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
33.23 (4.82)	1.0169	0.1148	0.0726	0.1750	0.2900	0.1467	0.0969	0.1028

44 (s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz



MEAN FACE PRESSURE = 33.23 kPa (4.820 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.30315 SECONDS

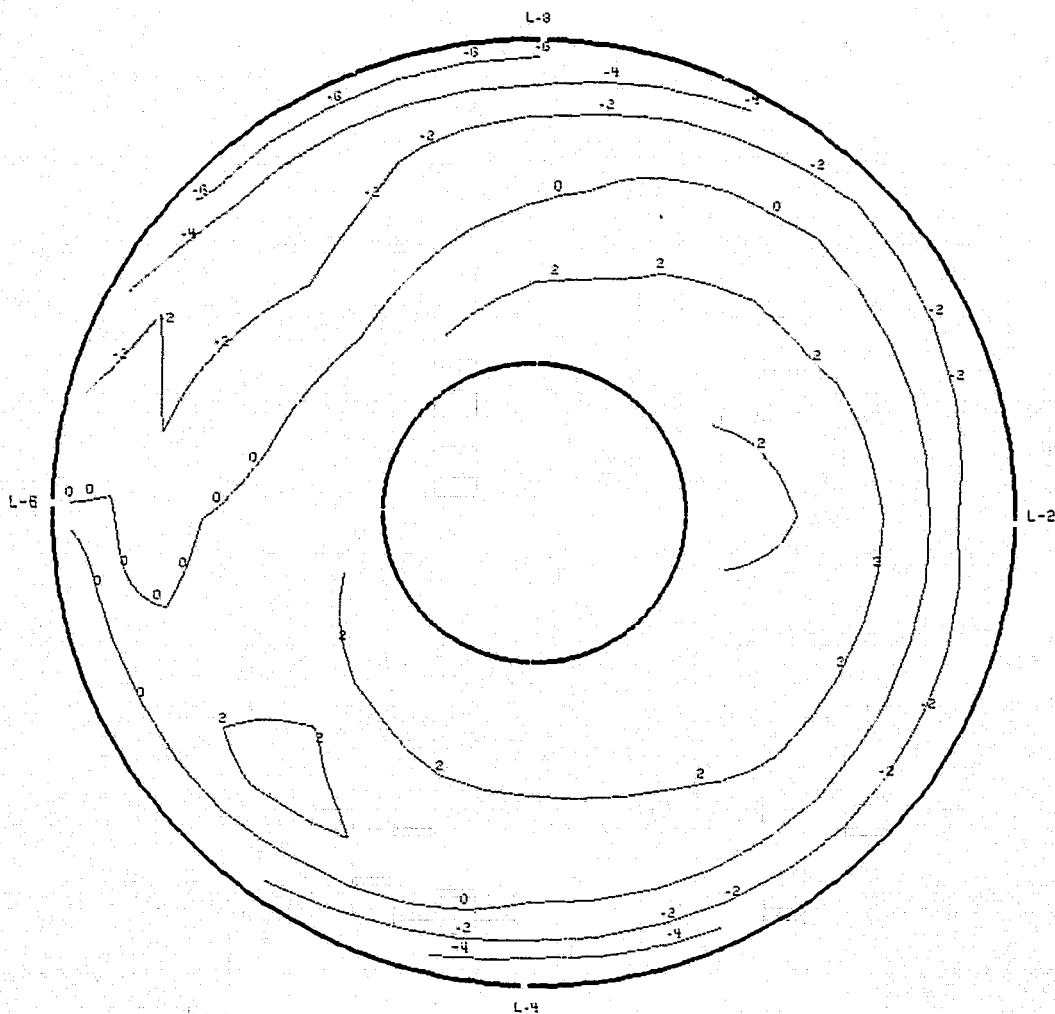
FIGURE G-44 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.57$, $\alpha = -3.7$, $\beta = 0.7$, WAT2 = 89.3 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT. 44
THE SEGMENT START TIME WAS AT 20:16:46.306

MACH	ALPHA	BETA	ALT	RNO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.6	0.8	17117 (56158)	-2.3	13.7	0.0	89.3%	-20.884
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
33.92 (4.92)	1.0269	0.1154	0.0747	0.1815	0.2970	0.1833	0.1041	0.0969

44 (t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz



MEAN FACE PRESSURE = 33.92 kPa (4.92 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.60494 SECONDS

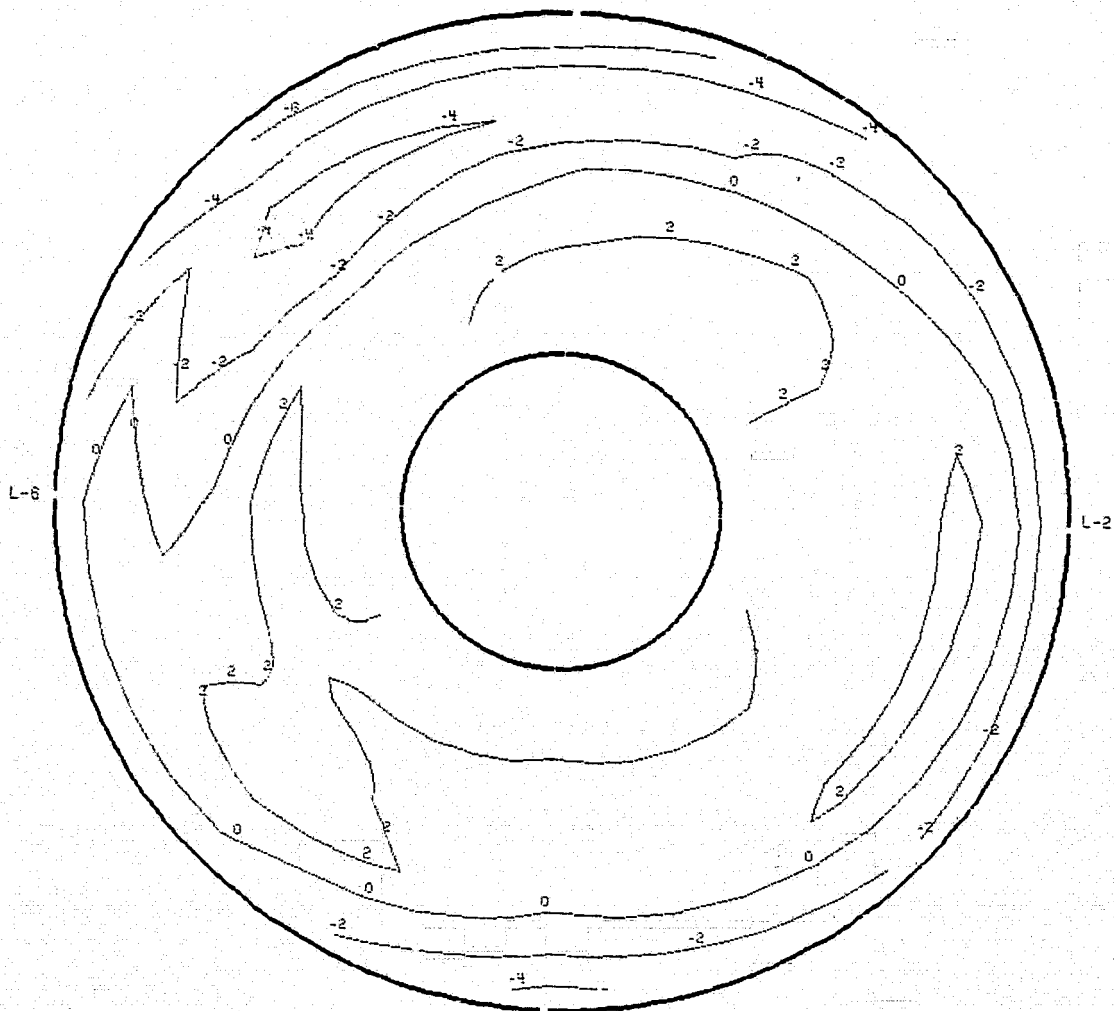
FIGURE G-44 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57$, $\alpha = -3.6$, $\beta = 0.8$, WAT2 = 89.3 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT.44
THE SEGMENT START TIME WAS AT 20:16:47.604

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.6	0.7	17163(56308)	-2.3	13.7	0.0	89.3%	-20.60
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
33.30(4.83)	1.0190	.1188	.0840	.200	.3188	.1541	.0643	.1142

44(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 33.30 kPa (4.83 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.3122 SECONDS

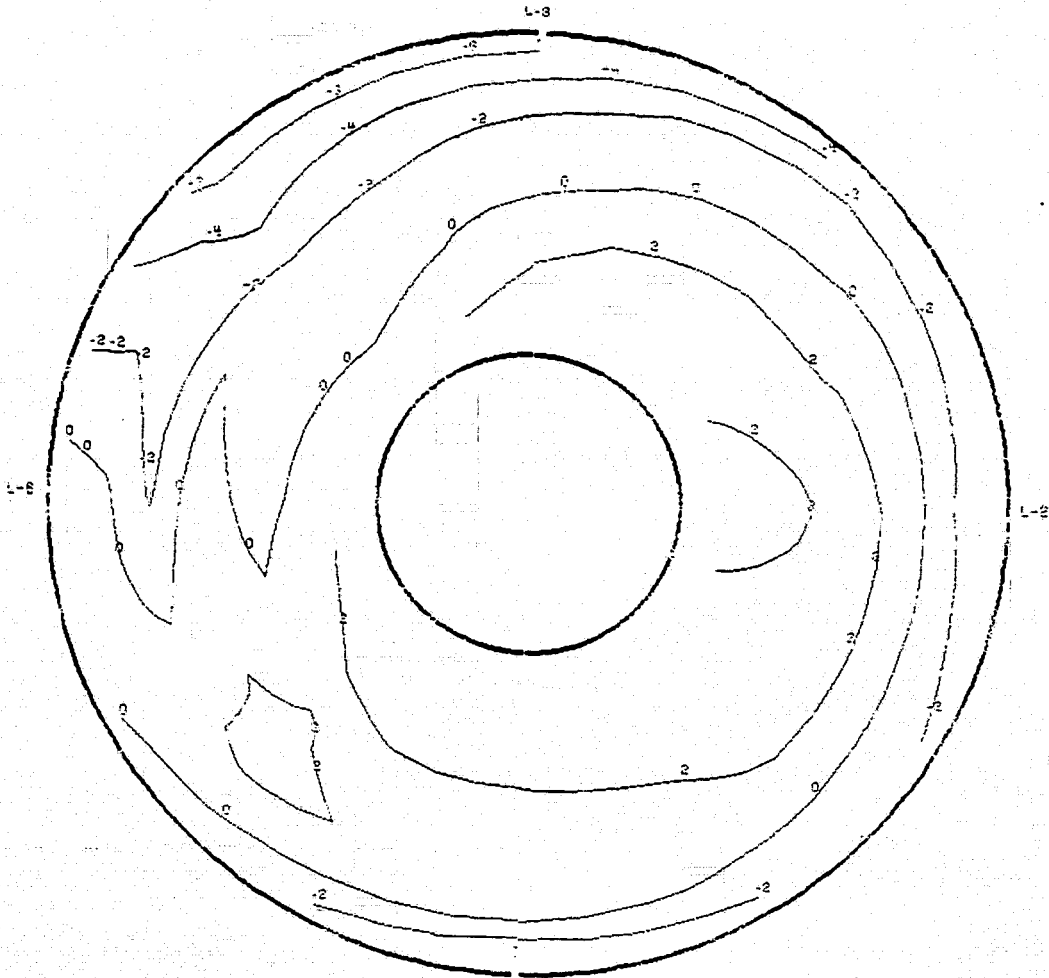
FIGURE G-44 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.57$, $\alpha = -3.6$, $\beta = 0.7$, WAT2 = 89.3 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 414/2 IDENT. 44
THE SEGMENT START TIME WAS AT 20:16: 46.906

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.57	-3.6	0.8	17117 (56158)	-2.3	13.7	0.0	89.3%	-20.884
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	KOSP	D2
33.93 (4.921)	1.0271	0.1502	0.0889	0.2141	0.3644	0.1832	0.1241	0.0959

44 (v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz



MEAN FACE PRESSURE = 33.93 kPa (4.921 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.60161 SECONDS

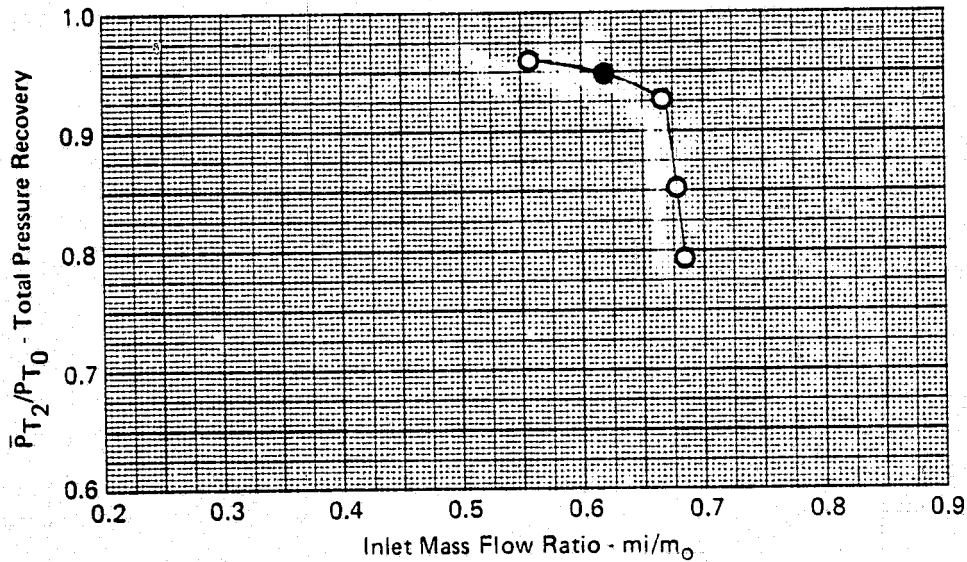
FIGURE G-44 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.57$, $\alpha = -3.6$, $\beta = 0.8$, WAT2 = 89.3 %

SERIES VIII - NASA Data Study

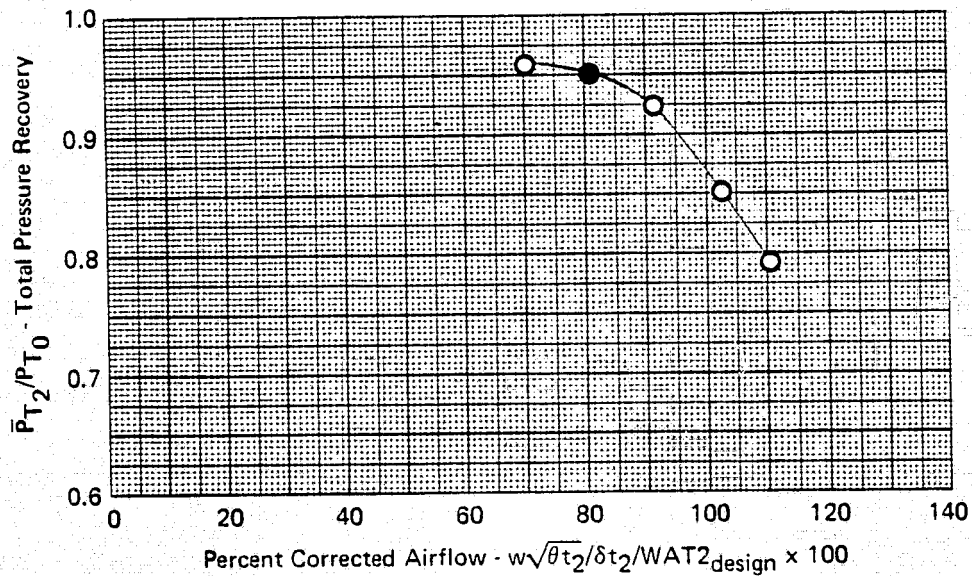
Part/Point - 15/9, Ident 45

RHO	DELTA3	BYPASS	CIVV
-3.0	17.4	0.0	-25.00

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



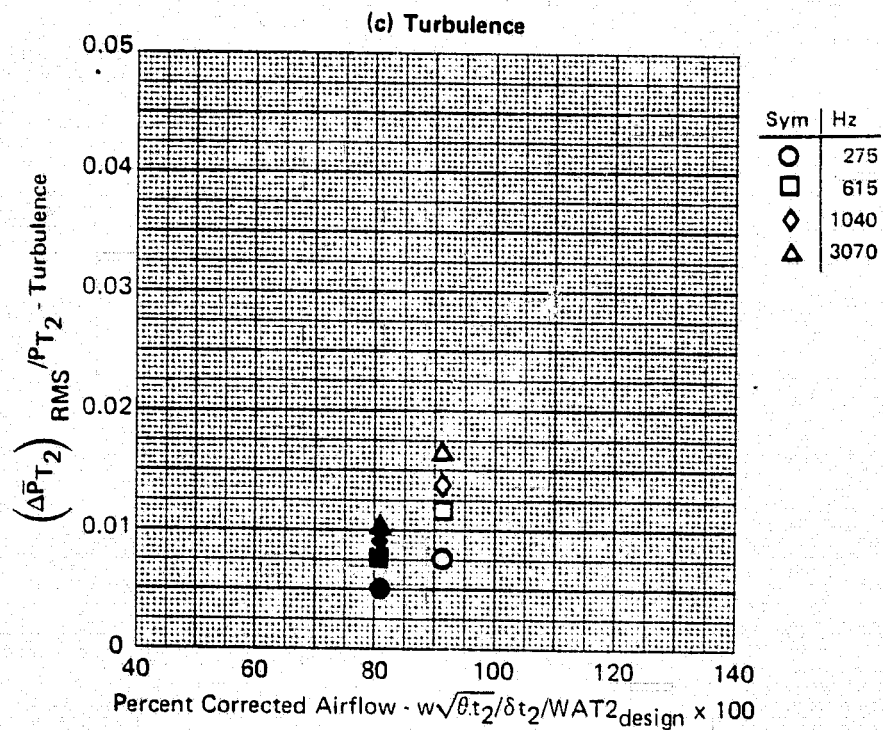
(b) Total Pressure Recovery vs Percent Corrected Airflow



GP77-0658-1

FIGURE G-45
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.5\%$

SERIES VIII - NASA Data Study
 Part/Point - 15/9, Ident 45
 RHO DELTA3 BYPASS CIVV
 -3.0 17.4 0.0 -25.00

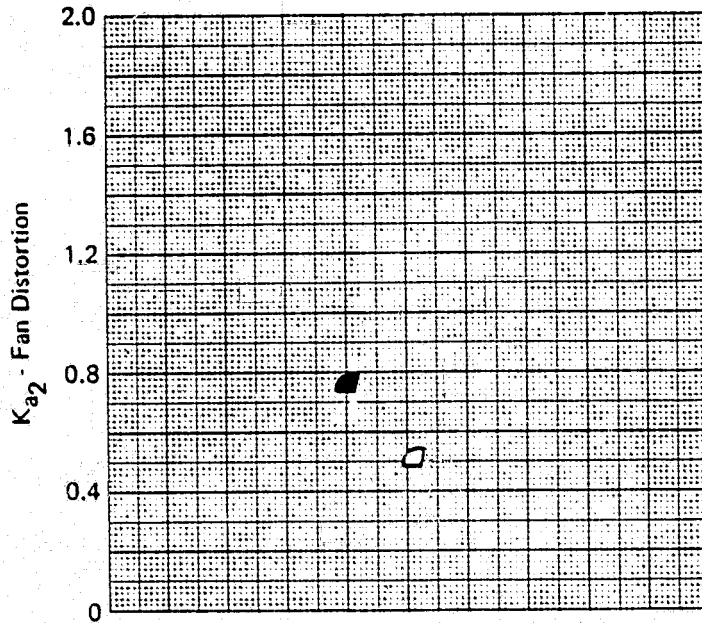


GP77-0658-5

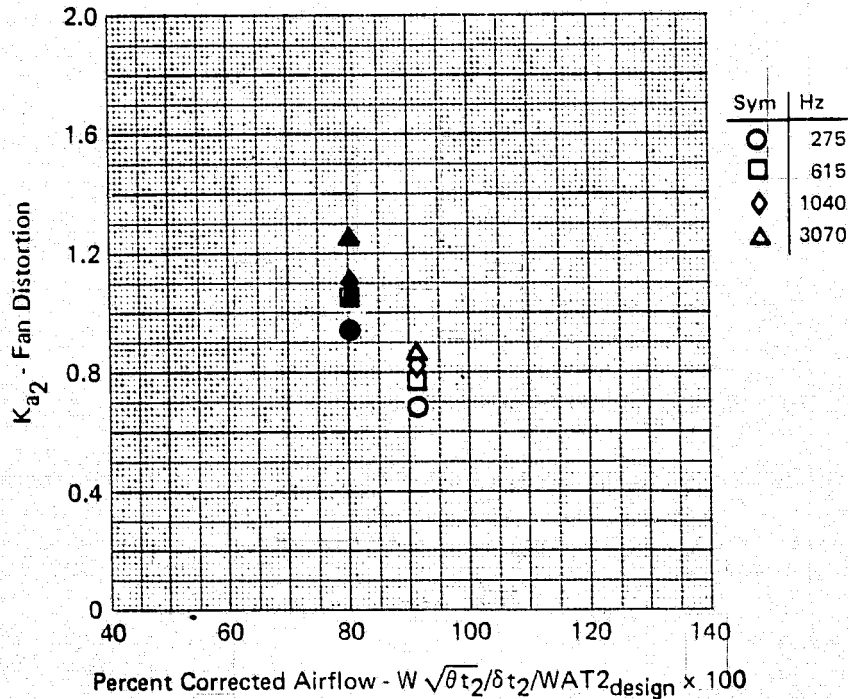
FIGURE G-45 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.5\%$

SERIES VIII - NASA Data Study
 Part/Point - 15/9, Ident 45
 RHO DELTA3 BYPASS CIVV
 -3.0 17.4 0.0 -25.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion



GP77-0658 3

FIGURE G-45 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.5\%$

SERIES VIII - NASA Data Study
 Part/Point - 15/9, Ident 45
 RHO DELTA3 BYPASS CIVV
 -3.0 17.4 0.0 -25.00

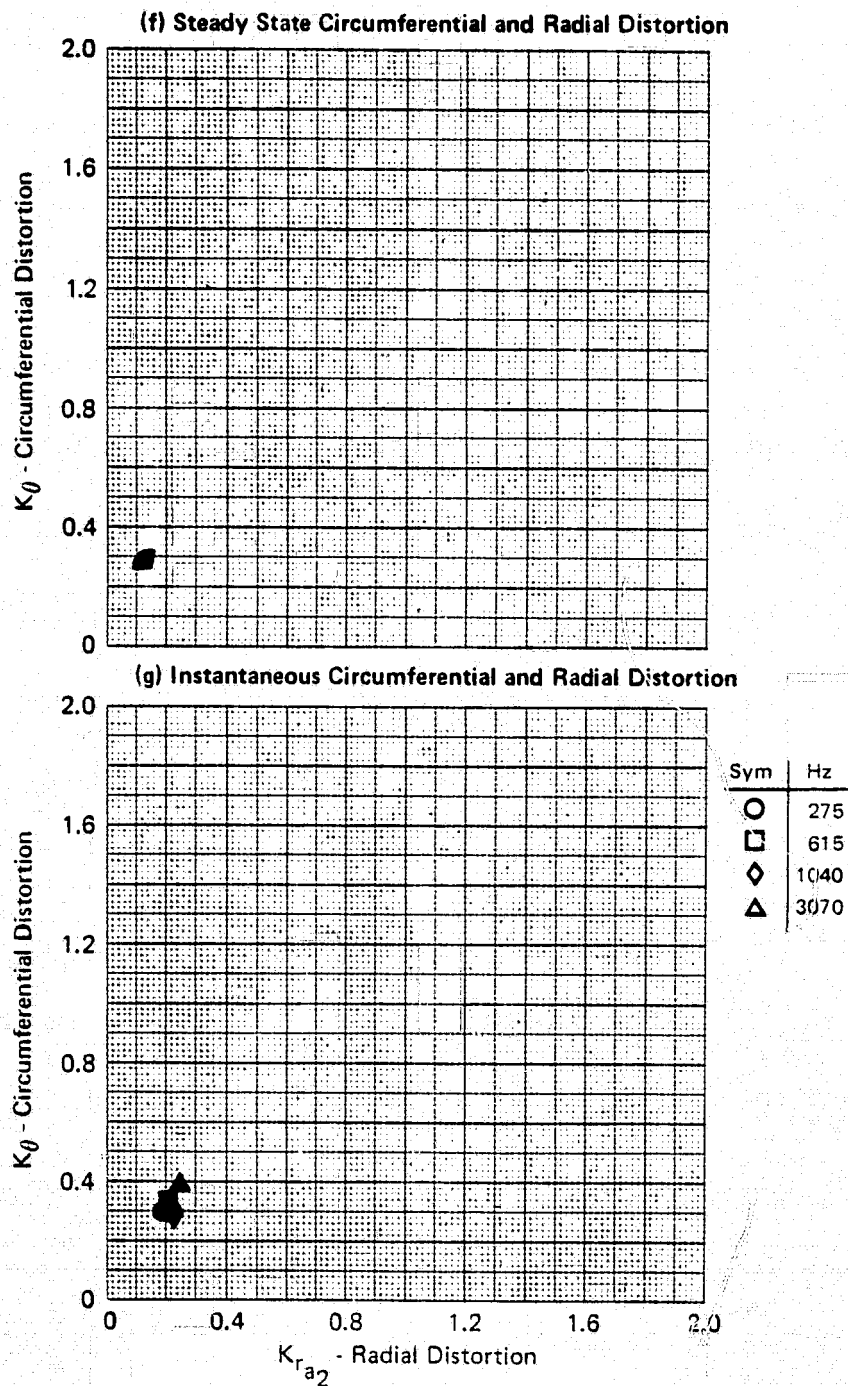


FIGURE G-45 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.5 %

SERIES VIII - NASA Data Study
 Part/Point - 15/9, Ident 45
 RHO DELTA3 BYPASS CIVV
 -3.0 17.4 0.0 -25.00

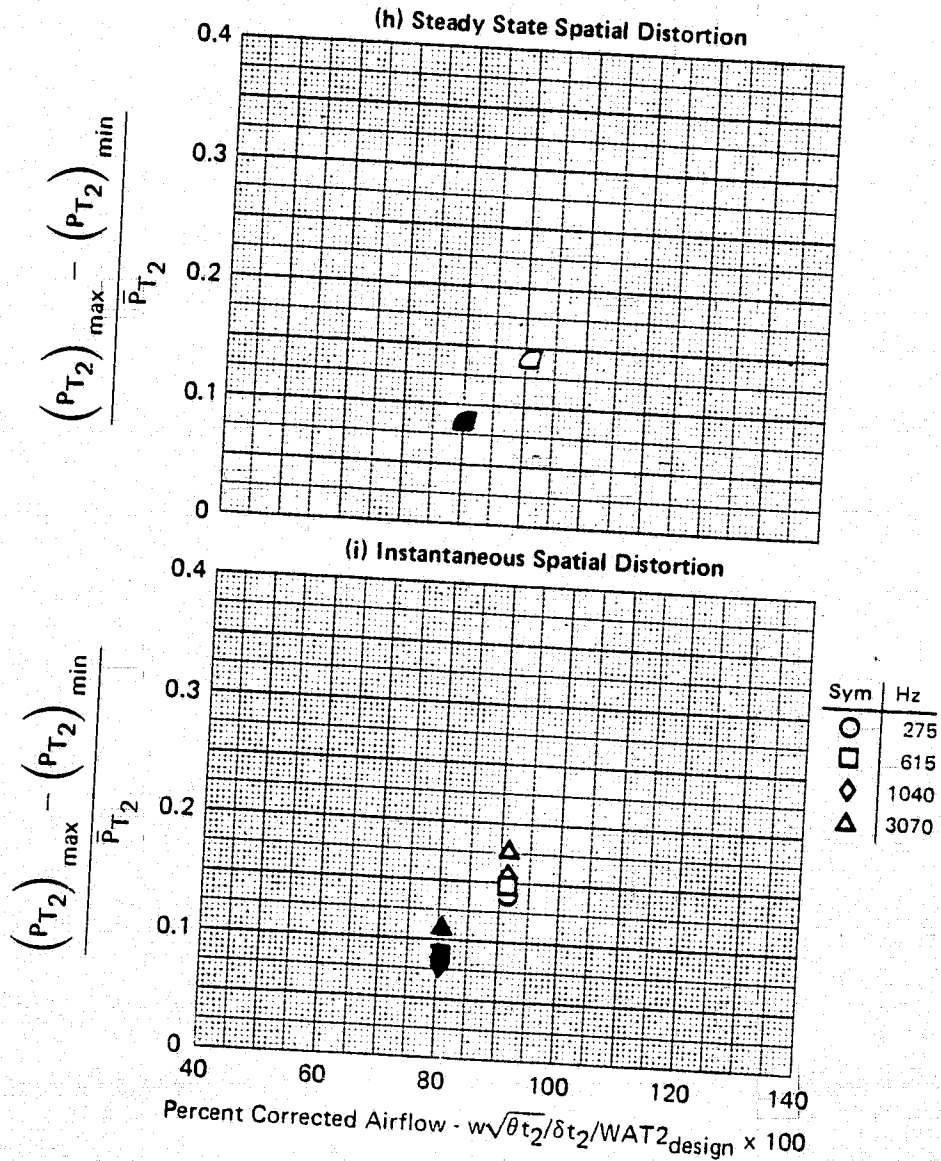


FIGURE G-45 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.5\%$

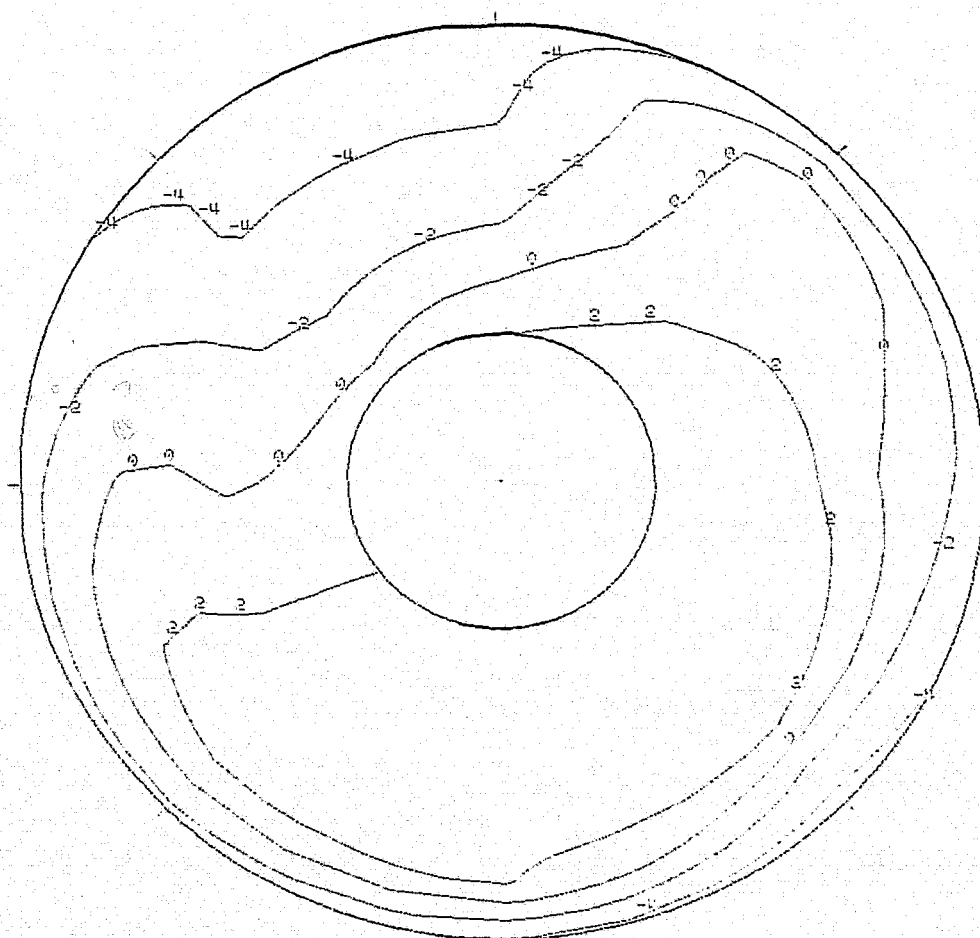
GP77-0658-4

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 9 IDENT. **45**
THE SEGMENT START TIME WAS AT 2: 3:15.146

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 17.4	BYPASS 0.0	WAT2 80.5%	CIVV -25.0
PI 36.38 (5.277)	PI/P3 1.000	KTHETA 0.234	KPA2 0.123	BKPA2 0.474	KQ2 0.753	KC2 0.356	KESP 0.313
							D2 0.225

45 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 36.38 kPa (5.277 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-45 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.5 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 9 IDENT. **45**
 THE SEGMENT START TIME WAS AT 2: 3:15.146

MACH
1.8

ALPHA
-2

BETA
0

RHO
-3.9

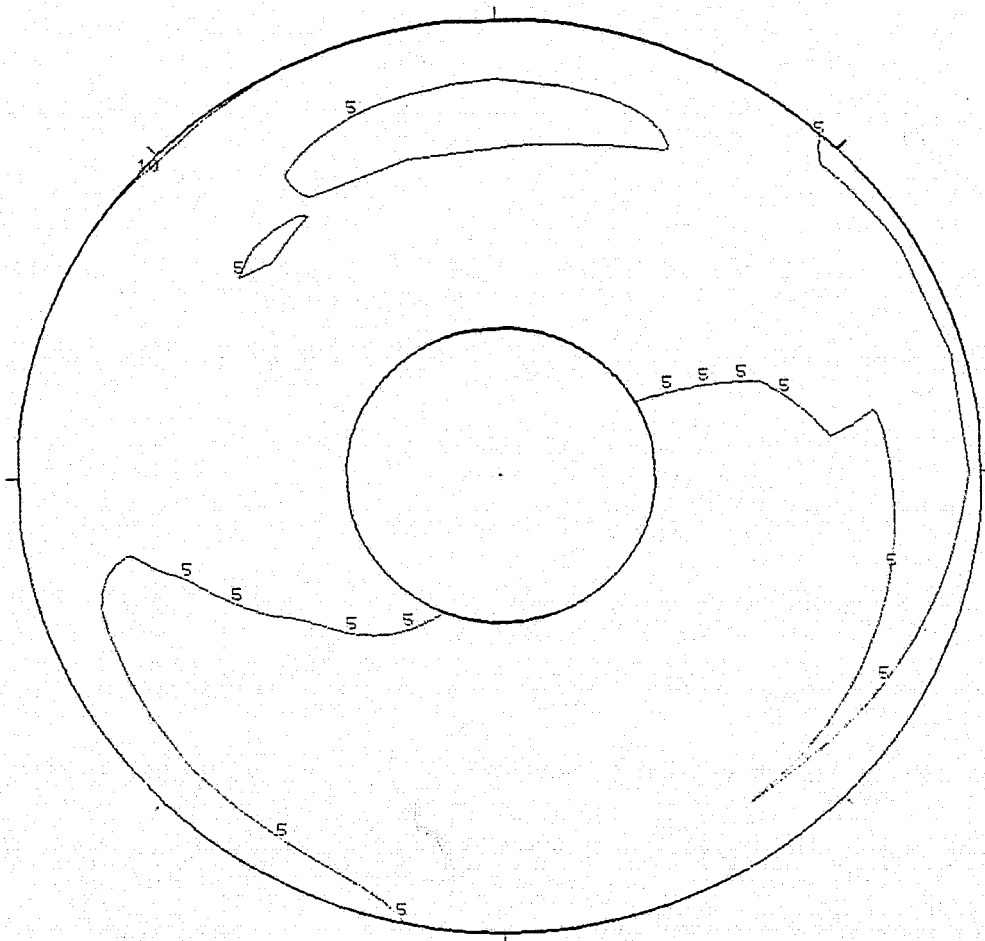
DELTA3
17.4

BYPASS
0.0

WAT2
80.5%

CIVV
-25.0

45(k) Turbulence Contour 275 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
 AVERAGE TURBULENCE = .00508

FIGURE G-45 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.5 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 9 IDENT. **45**
 THE SEGMENT START TIME WAS AT 2: 3:15.146

MACH
1.8

ALPHA
-2

BETA
0

RHO
-3.0

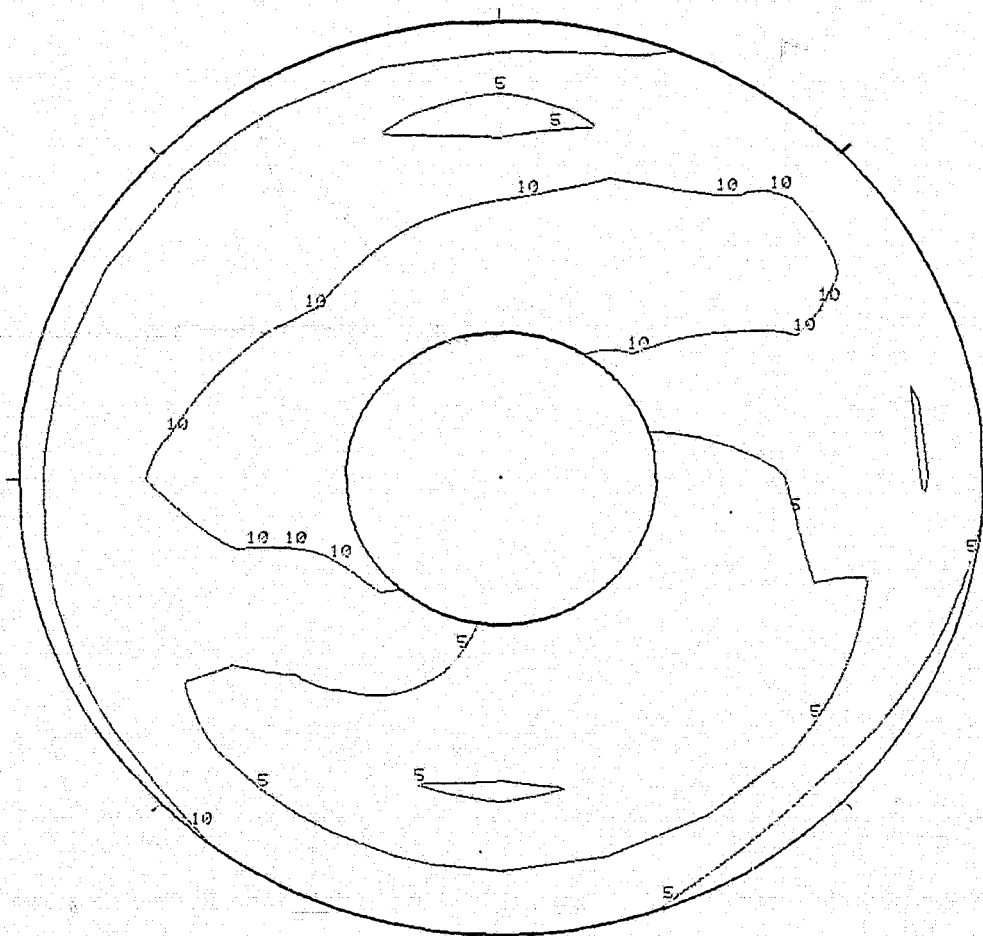
DELTA3
17.4

BYPASS
0.0

WAT2
80.5%

CIVV
-25.0

45 (I) Turbulence Contour 615 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
 AVERAGE TURBULENCE = .00741

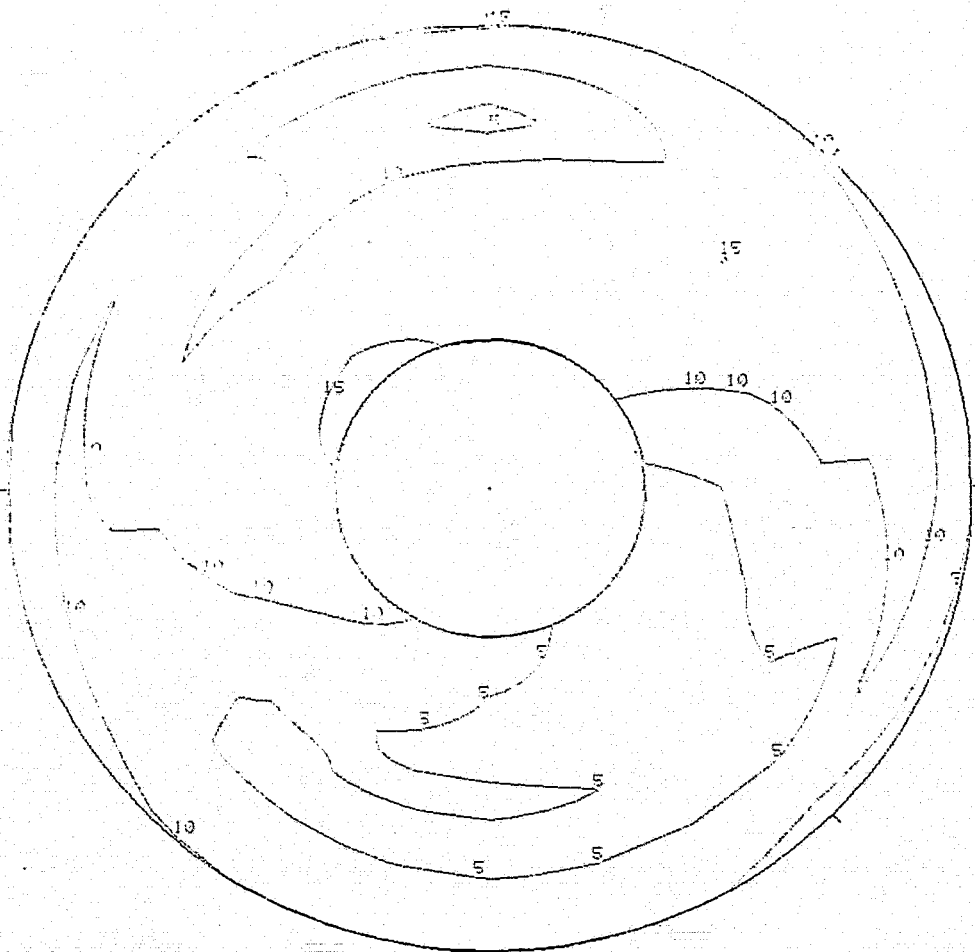
FIGURE G-45 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.5\%$

APPENDIX 1 - 1997 WATER STUDY

45

[illegible]

**45(m) Turbulence Contour
1040 Hz**



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00906

FIGURE G-45 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.5 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 9 IDENT. 45
THE SEGMENT START TIME WAS AT 2: 3:15.146

MACH
1.8

ALPHA
-2

BETA
0

RHO
-3.0

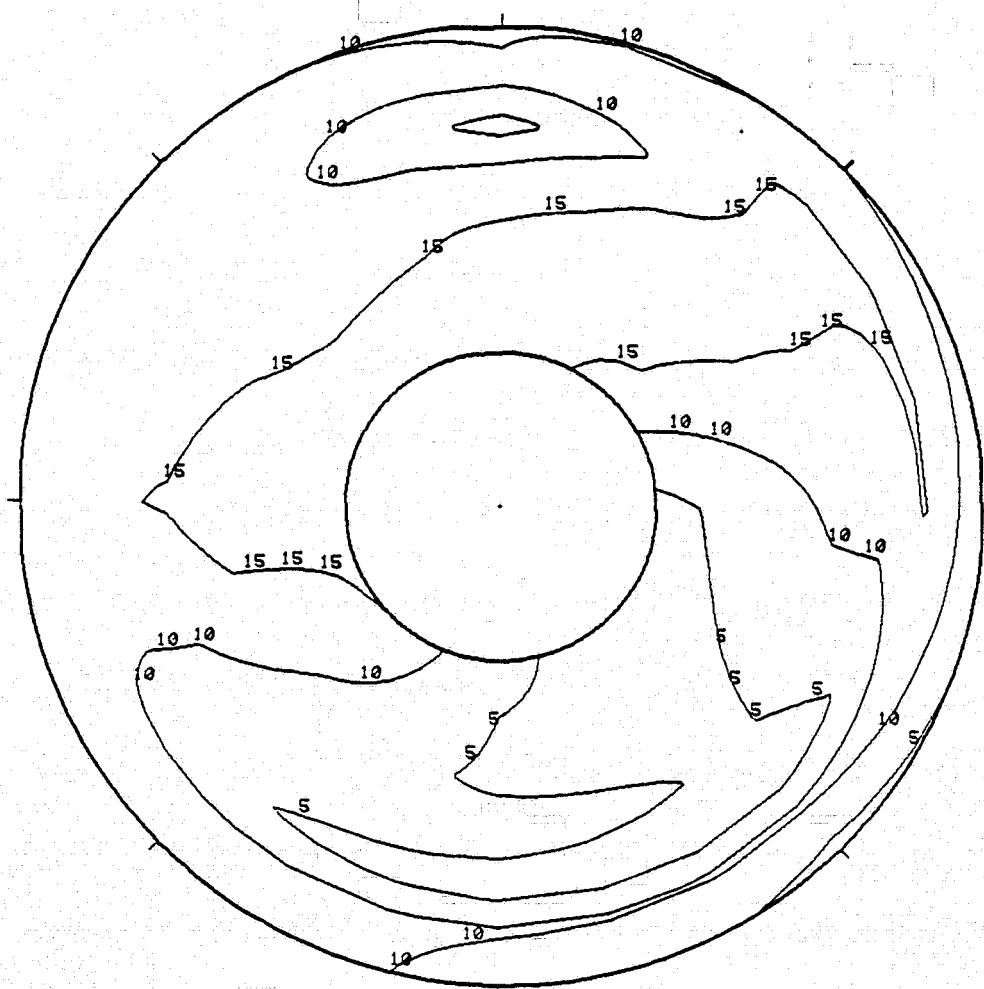
DELTA3
17.4

BYPASS
0.0

WAT2
80.5%

CIVV
-25.0

45 (n) Turbulence Contour 3070 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01060

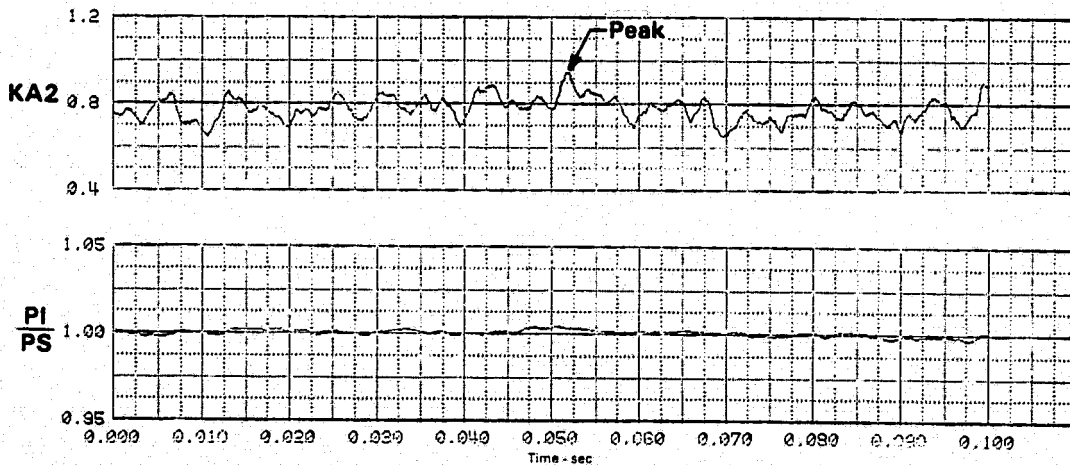
FIGURE G-45 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.5 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 9 IDENT. 45
THE SEGMENT START TIME WAS AT 2: 3:15.146

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 17.4	BYPASS 0.0	WAT2 80.5%	QIVV -25.0
PI 36.51 (5.295)	PI/PS 1.000	KTHETA 0.300	KRA2 0.174	SKRA2 0.844	KQ2 0.344	KQ3 0.426	KQSP 0.363
							D2 0.079

45(o) Time History Plots 275 Hz



PEAK AT TIME = 0.051645 SECONDS

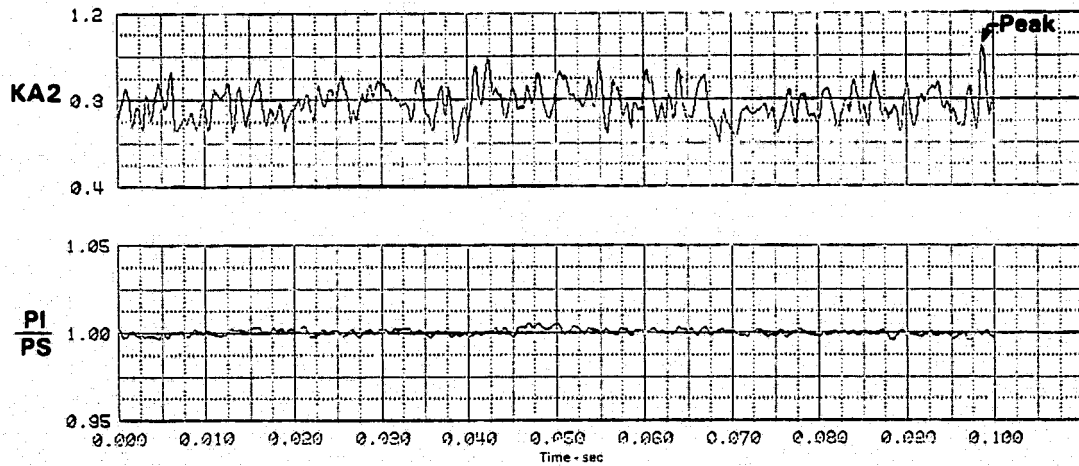
FIGURE G-45 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.5%

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 9 IDENT. 45
THE SEGMENT START TIME WAS AT 2: 3:15.146

MACH 1.8	ALPHA -2	BETA 0	PHI -3.0	DELTA2 17.4	BYPASS 0.0	WAT2 80.5%	QIVV -25.0
P1 36.36 (5.274)	P1/PS 0.993	KTHETA 0.240	KRA2 0.191	BKRA2 3.703	K32 1.349	KC2 0.417	KCCP 0.449
							D2 0.027

45(p) Time History Plots 615 Hz



PEAK AT TIME = 0.088670 SECONDS

FIGURE G-45 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.5\%$

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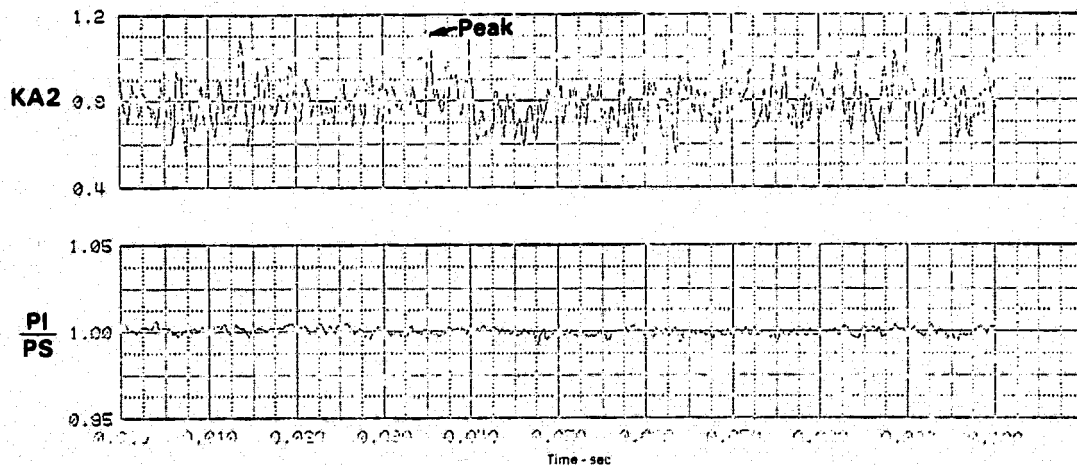
SERIES VIII - 1987 DATA STUDY

DATA REPORT POINT 15 / 3 IDENT. 45
THE SEGMENT START TIME WAS AT 2: 34: 04.5

1924 1.3	ALPHA -2	BETA 0	340 -3.0	151.7-3 17.4	EXPRESS 1.4	80.5%	29%
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36.38 (5.275)

45(q) Time History Plots 1040 Hz



PEAK AT TIME = 0.035475 SECONDS

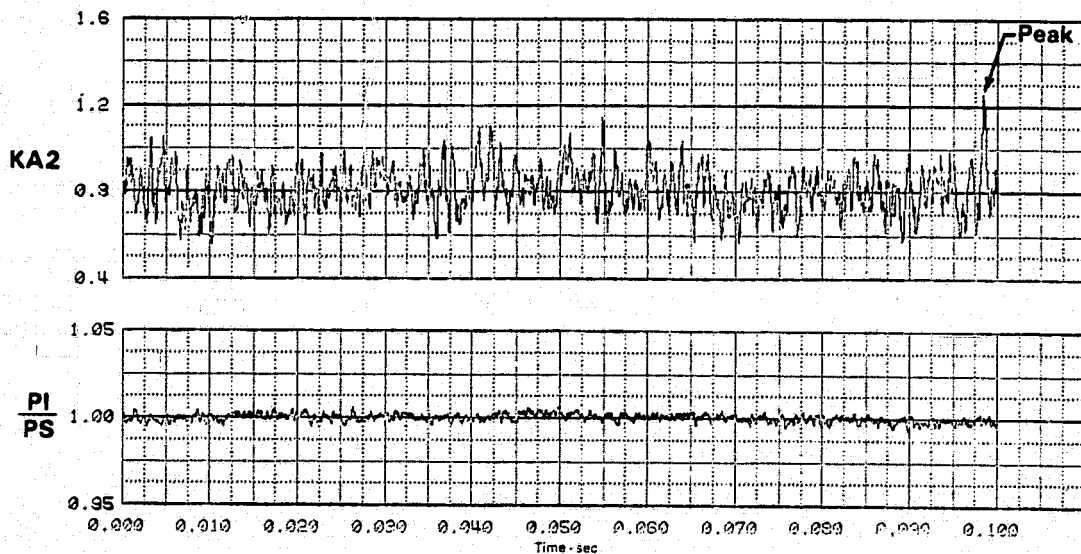
FIGURE G-45 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.5%

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 9 IDENT. 45
THE SEGMENT START TIME WAS AT 2: 3:15.146

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 17.4	BYPASS 0.0	WAT2 80.5%	CIWV -25.0
PI 36.29 (5.264)	PI/PS- 0.997	KTHETA 0.390	KR02 0.234	BKR02 0.835	K02 1.255	K02 0.453	K0SP- 0.498
							O2 0.109

45(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.098415 SECONDS

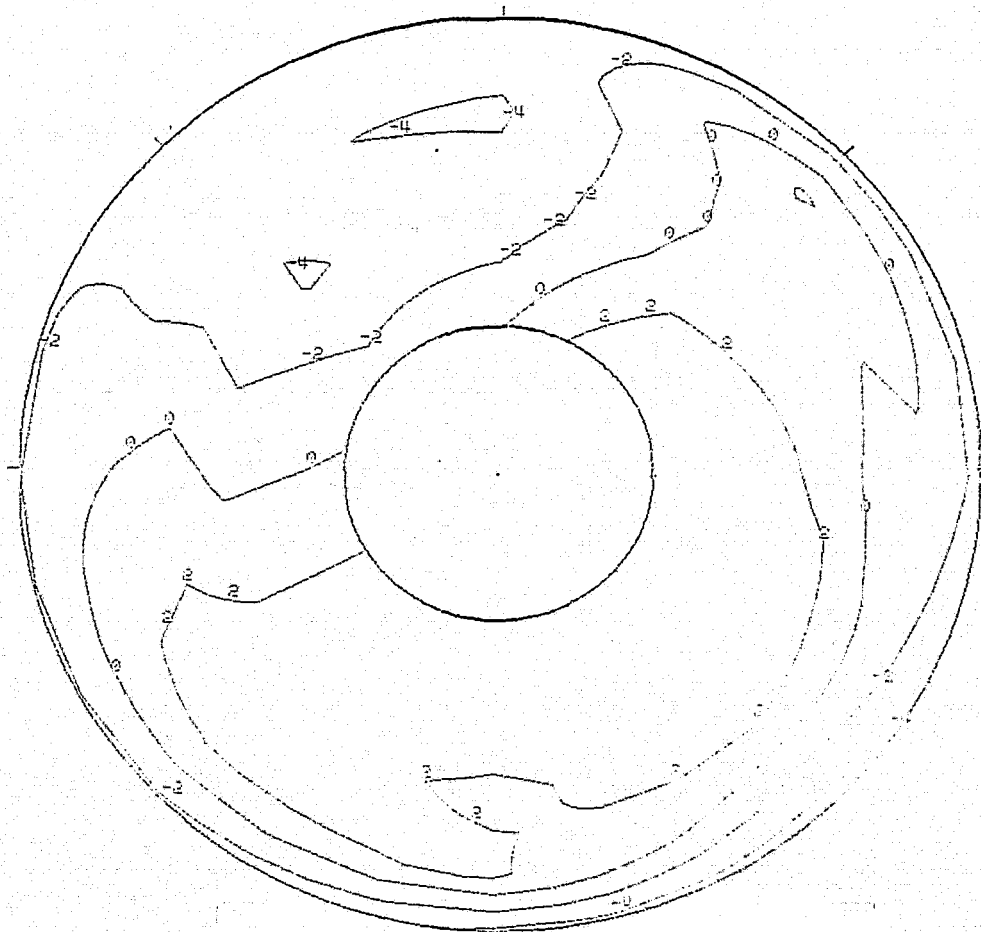
FIGURE G-45 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.5\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 9 IDENT. 45
THE SEGMENT START TIME WAS AT 2: 3:15.146

MACH 1.8	ALPHA -2	BETA 0	PHO -3.0	DELTA3 17.4	BYPASS 0.0	WAT2 81.5%	QIVV -25.0
PI 36.51 (5.295)	PI/PS 1.003	KTHETA 0.300	KPA2 0.174	BKPA2 0.644	KQ2 0.344	KQ2 0.456	KQSP 0.368
							D2 0.979

45(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 275 Hz



MEAN FACE PRESSURE = 36.51 kPa (5.295 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.051645 SECONDS

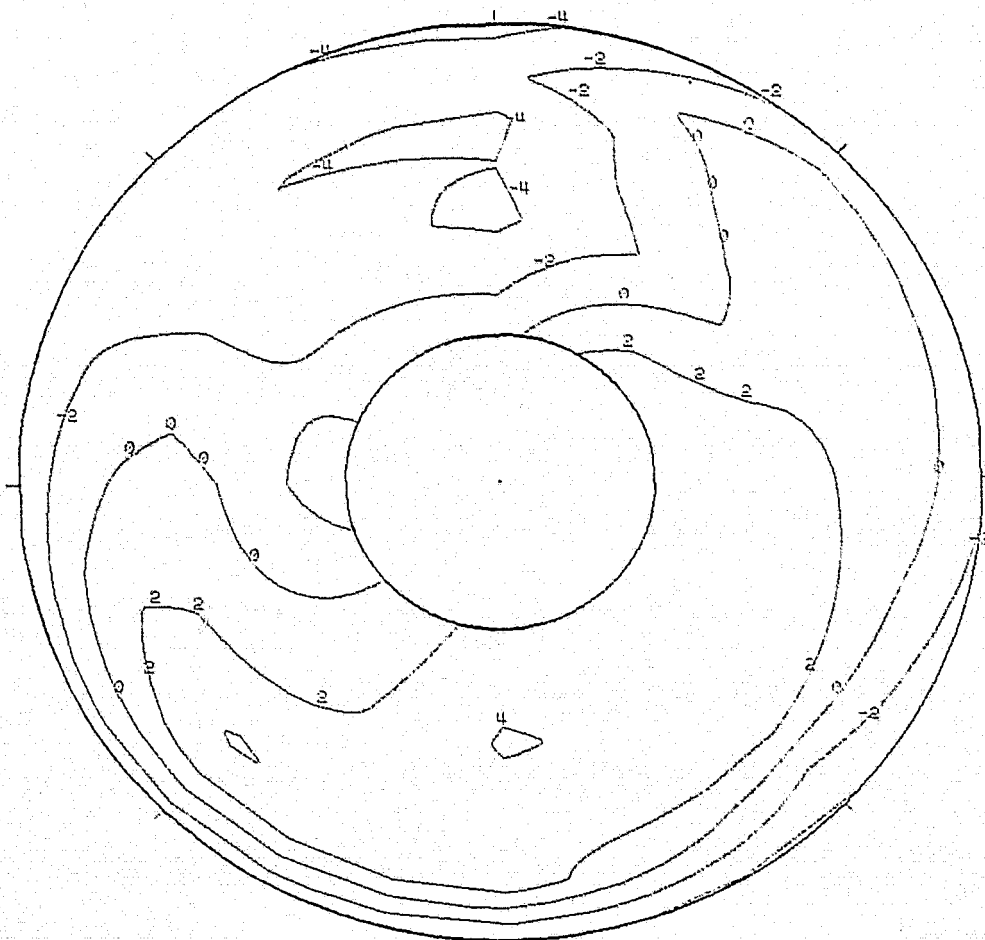
FIGURE G-45 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.5\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 3 IDENT. 45
THE SEGMENT START TIME WAS AT 2: 3:15.146

MACH 1.8	ALPHA -2	BETA 0	PHI -3.0	DELTA3 17.4	BYPASS 0.0	WAT2 80.5%	CIVV -35.0
PI 36.36 (5.274)	PI/PS 3.999	KTHETA 0.340	KPA3 0.191	BKPA3 0.709	KAC 1.048	KC2 0.417	KD3P 0.499
							DS 0.097

45(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 615 Hz



MEAN FACE PRESSURE = 36.36 kPa (5.274 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.098670 SECONDS

FIGURE G-45 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.5 %

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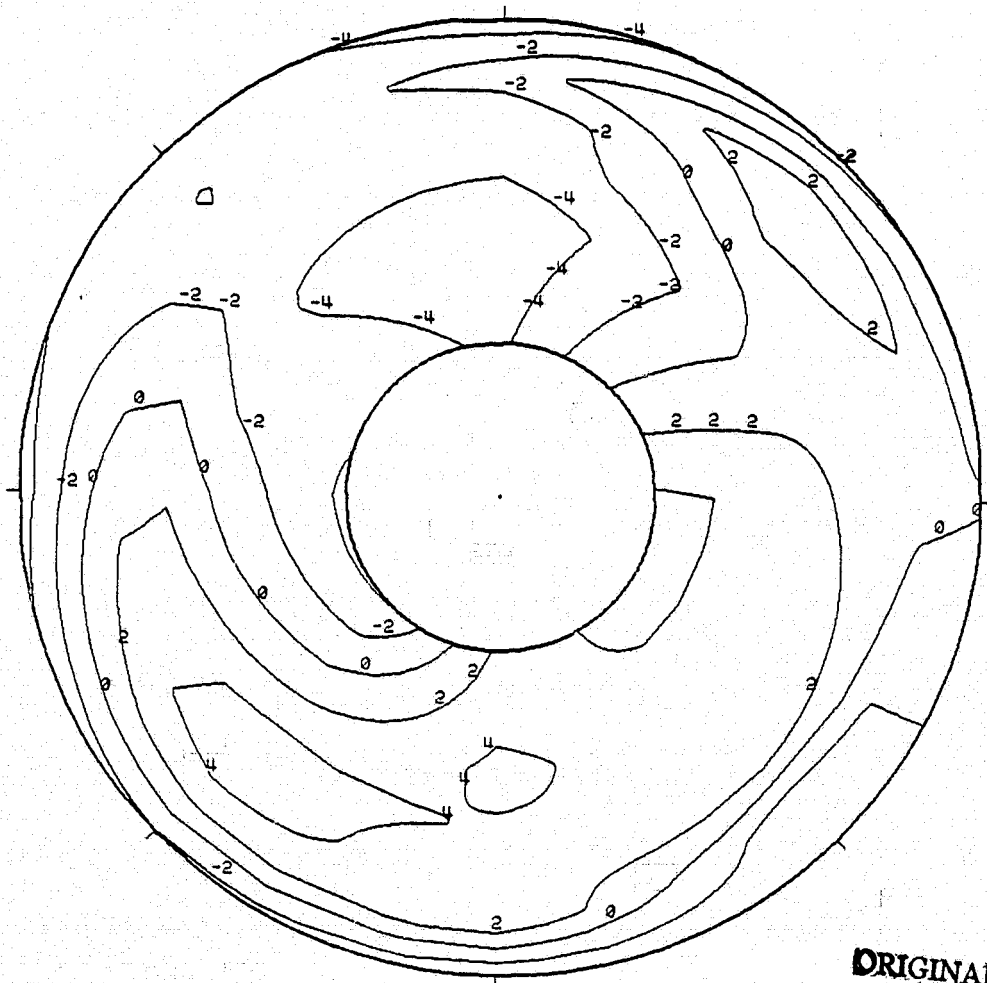
FIGURE G-45 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.5$ %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 9 IDENT. 48
THE SEGMENT START TIME WAS AT 2: 3:15.146

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 17.4	BYPASS 0.0	WAT2 80.6%	CIVV -25.0
PI 36.29 (5.264)	PI/PS 0.997	KTHETA 0.390	KRA2 0.234	BKRA2 0.865	KA2 1.255	KC2 0.453	KOSP 0.498
							D2 0.109

45(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 3070 Hz



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MEAN FACE PRESSURE = 36.29 kPa (5.264 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.098415 SECONDS

FIGURE G-45 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.5 %

SERIES VIII - NASA Data Study

Part/Point - 15/5, Ident 46

RHO	DELTA3	BYPASS	CIVV
-3.0	17.4	0.0	-17.60

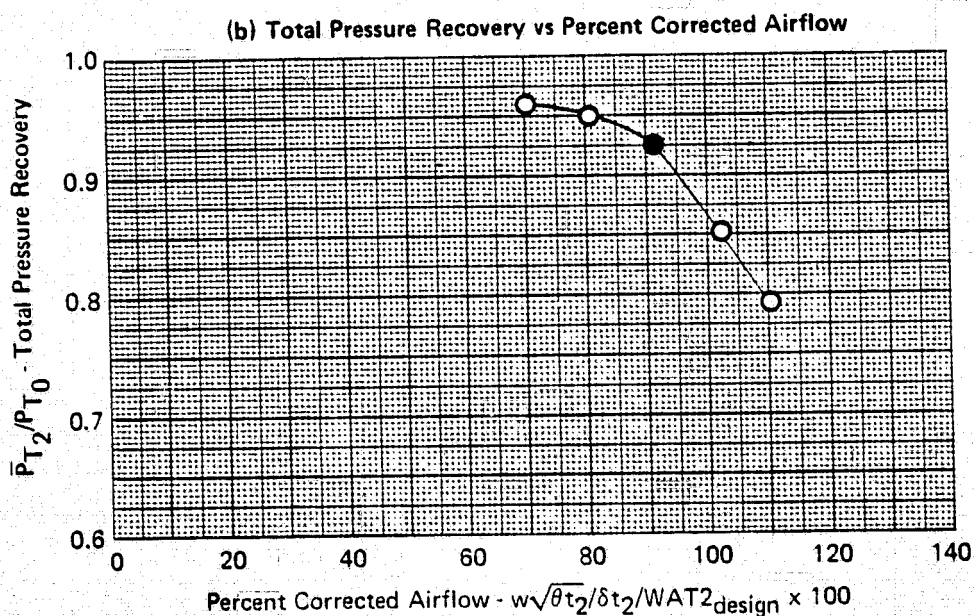
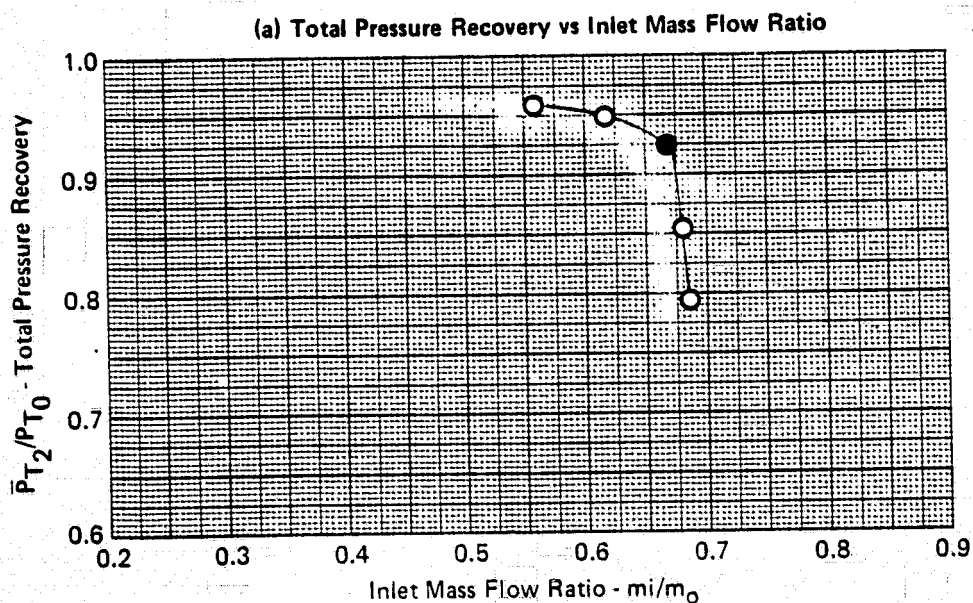
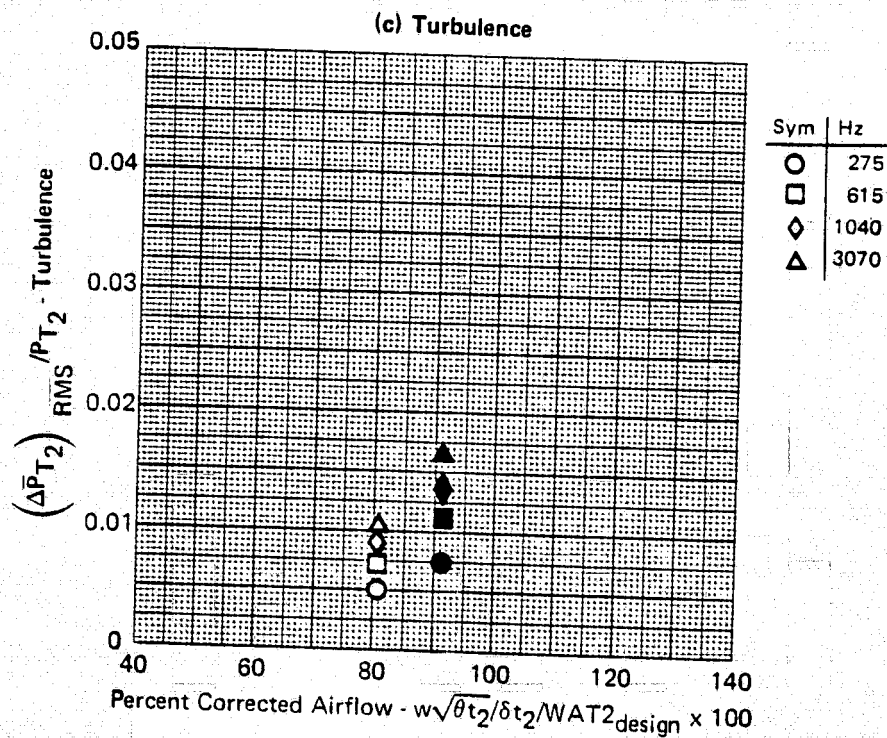


FIGURE G-46

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 91.0\%$

GP77-0658-1

SERIES VIII - NASA Data Study
 Part/Point - 15/5, Ident 46
 RHO DELTA3 BYPASS CIVV
 -3.0 17.4 0.0 -17.60



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FIGURE G-46 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 91.0$ %

SERIES VIII - NASA Data Study
 Part/Point - 15/5, Ident 46
 RHO DELTA3 BYPASS CIVV
 -3.0 17.4 0.0 -17.60

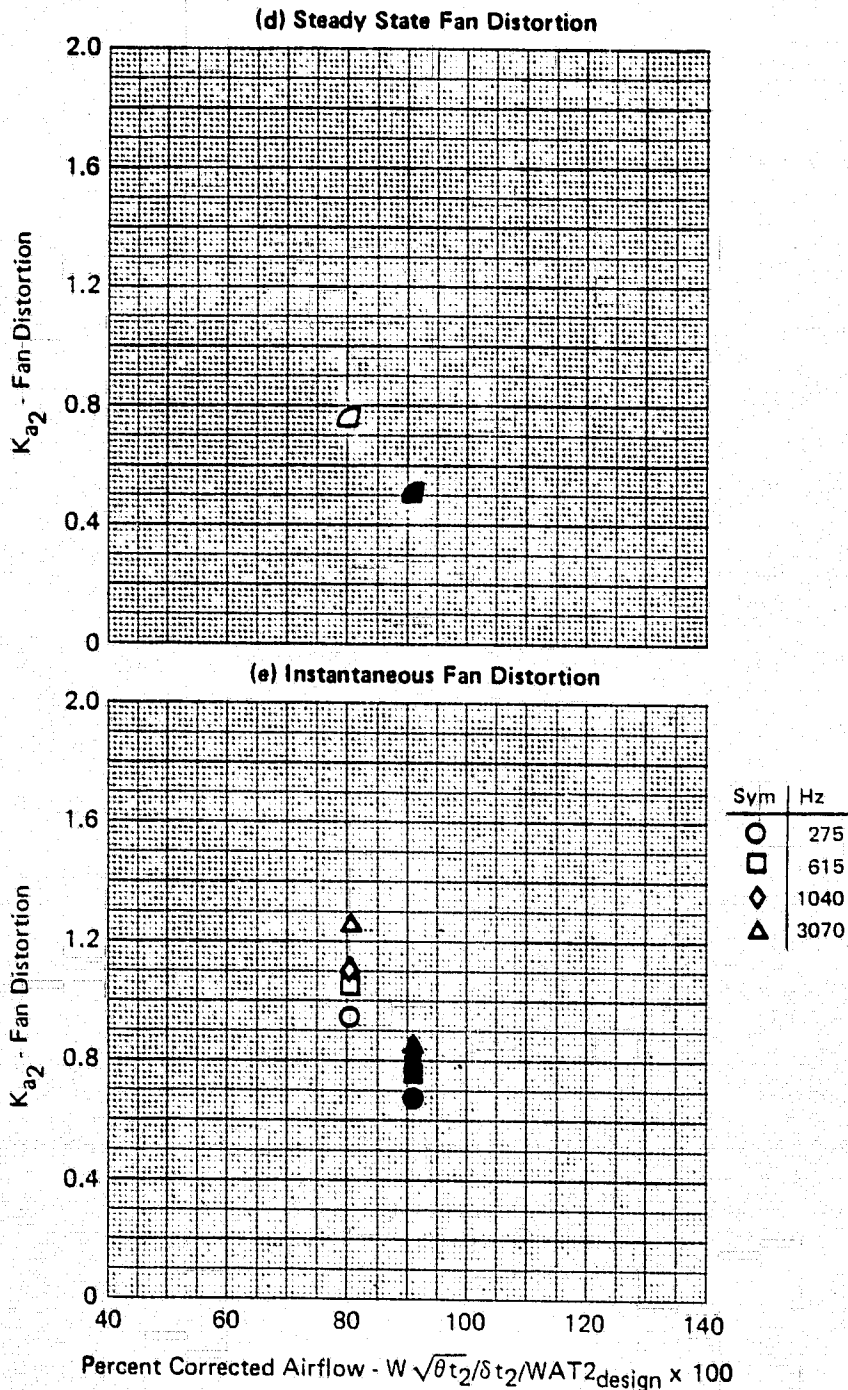
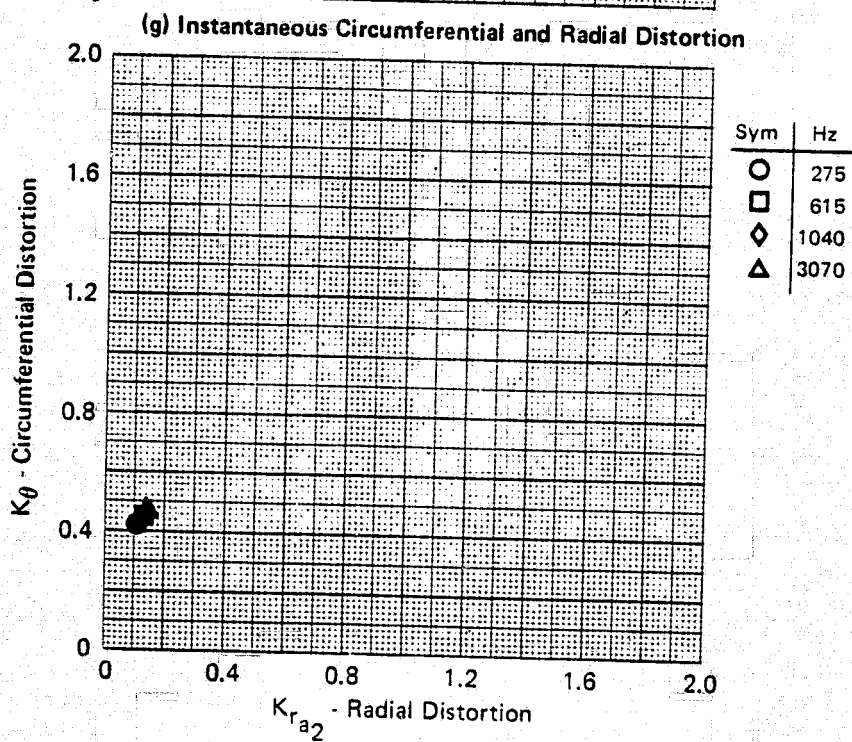
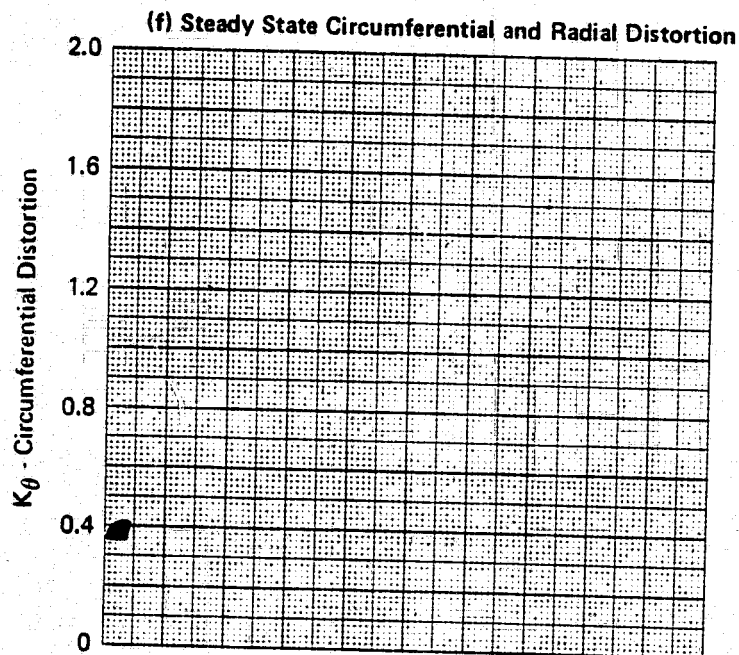


FIGURE G-46 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 91.0\%$

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SERIES VIII - NASA Data Study
 Part/Point - 15/5, Ident 46
 RHO DELTA3 BYPASS CIVV
 -3.0 17.4 0.0 -17.60



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FIGURE G-46 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 91.0 %

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SERIES VIII - NASA Data Study
 Part/Point - 15/5, Ident 46
 RHO DELTA3 BYPASS CIVV
 -3.0 17.4 0.0 -17.60

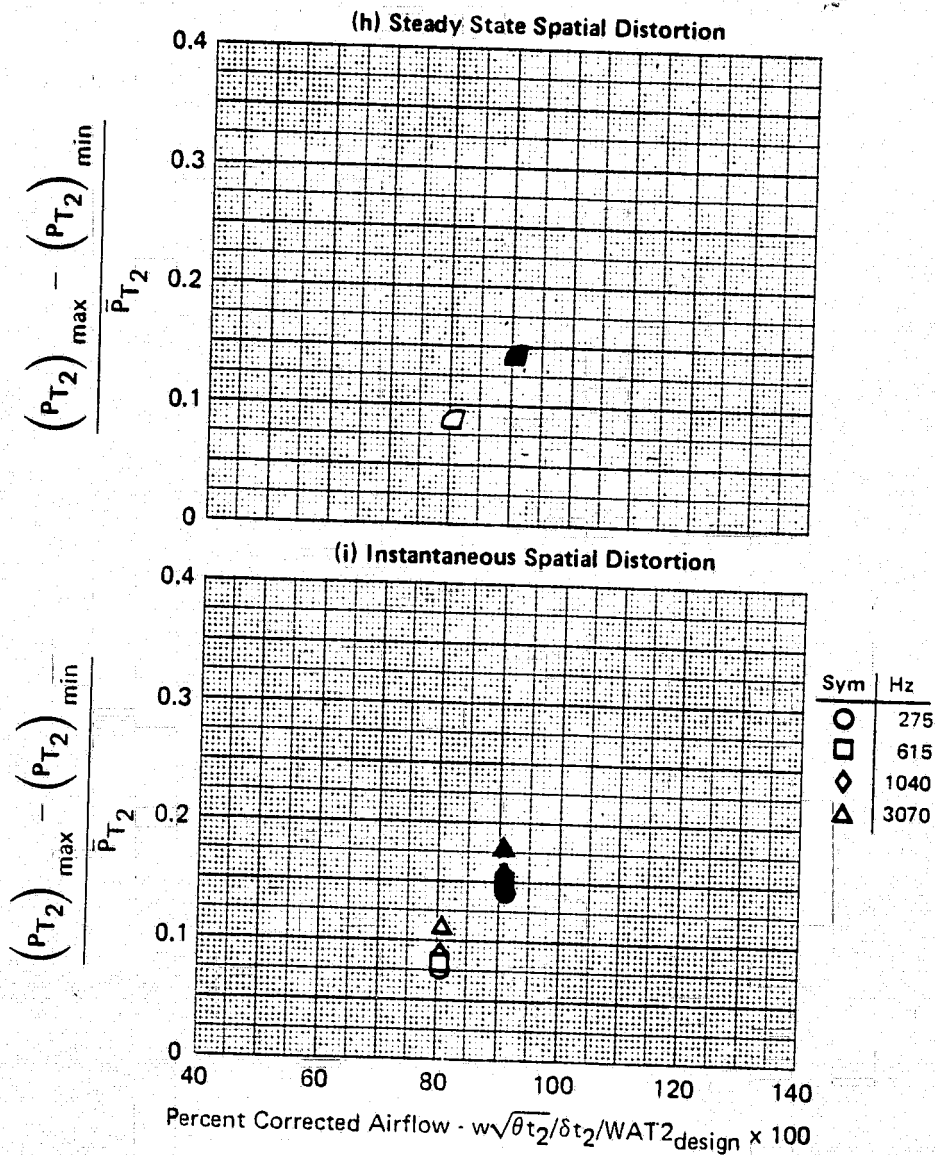


FIGURE G-46 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 91.0 \%$

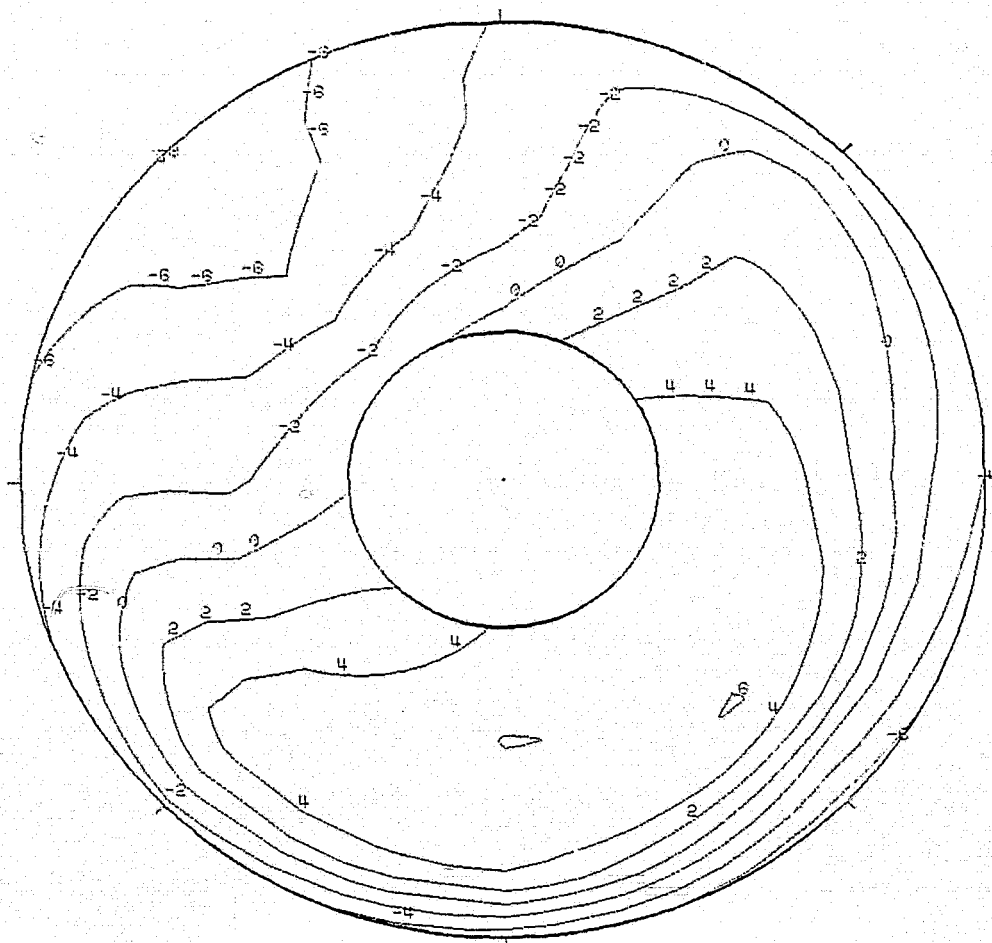
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. **46**
THE SEGMENT START TIME WAS AT 1:57:37.045

MACH 1.3	ALPHA -2	BETA 0	PHO -3.0	DELTA3 17.4	BYPASS 0.0	WAT2 91.0%	CIVV -17.6
P1 35.38 (5.131)	P1/P3 1.000	KTHETA 0.377	KPA3 0.054	BKPA3 0.125	KP3 0.502	KC3 0.433	KASP 0.435
							D2 0.140

46 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 35.38 kPa (5.131 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-46 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 91.0 %

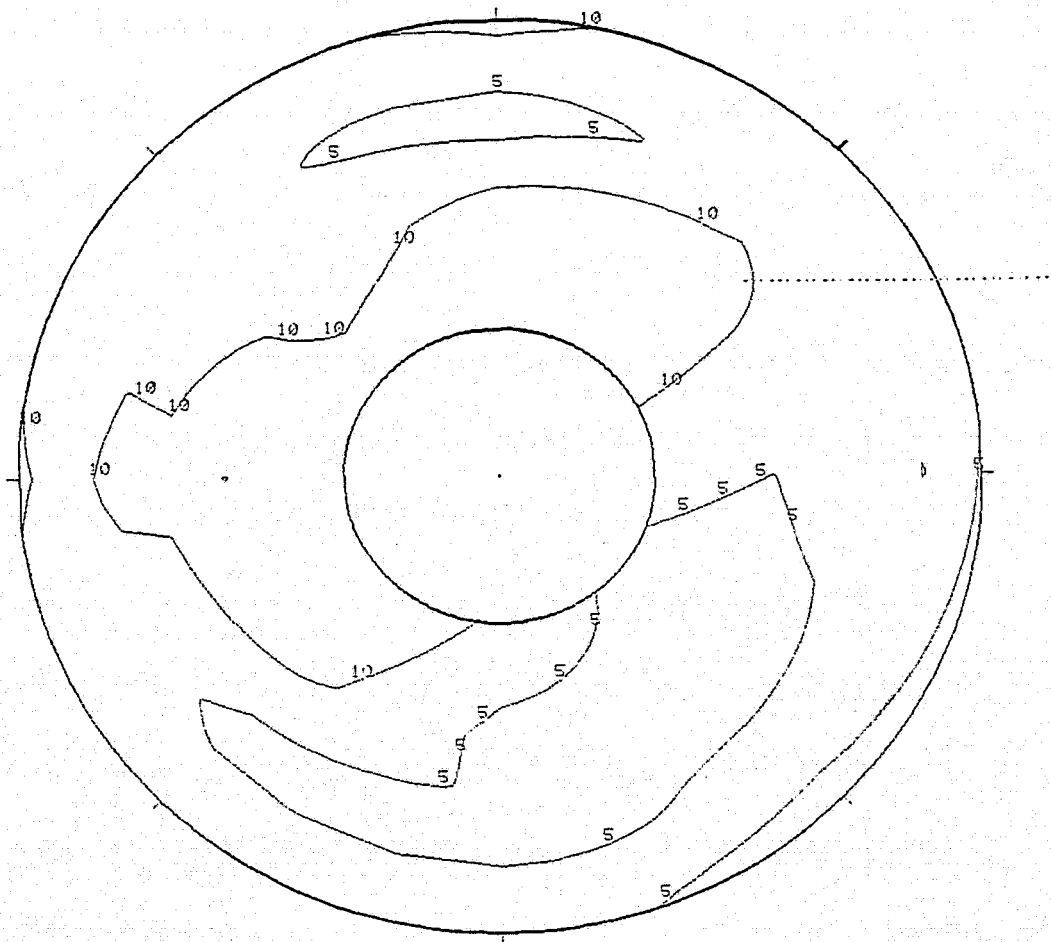
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. 46
THE SEGMENT START TIME WAS AT 1:57:37.045

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
1.8	-2	0	-3.0	17.4	0.0	91.0%	-17.6

46(k) Turbulence Contour 275 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00770

FIGURE G-46 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 91.0\%$

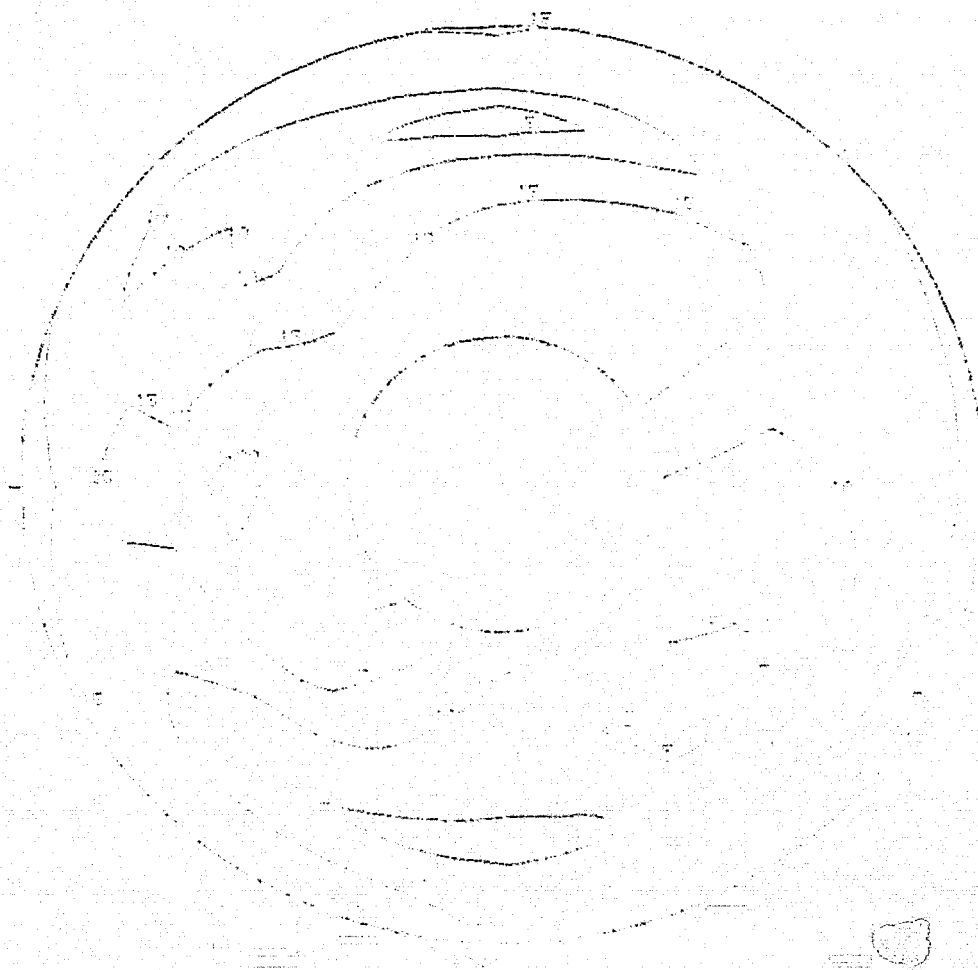
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. 46
THE SEGMENT START TIME WAS AT 1:57:30.000

MACH 1.8 ALPHA -2 BETA 0 DELTA 0 EPSI 0 WAT2 91.0% SHW 0.0%

46(I) Turbulence Contour
615 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01147

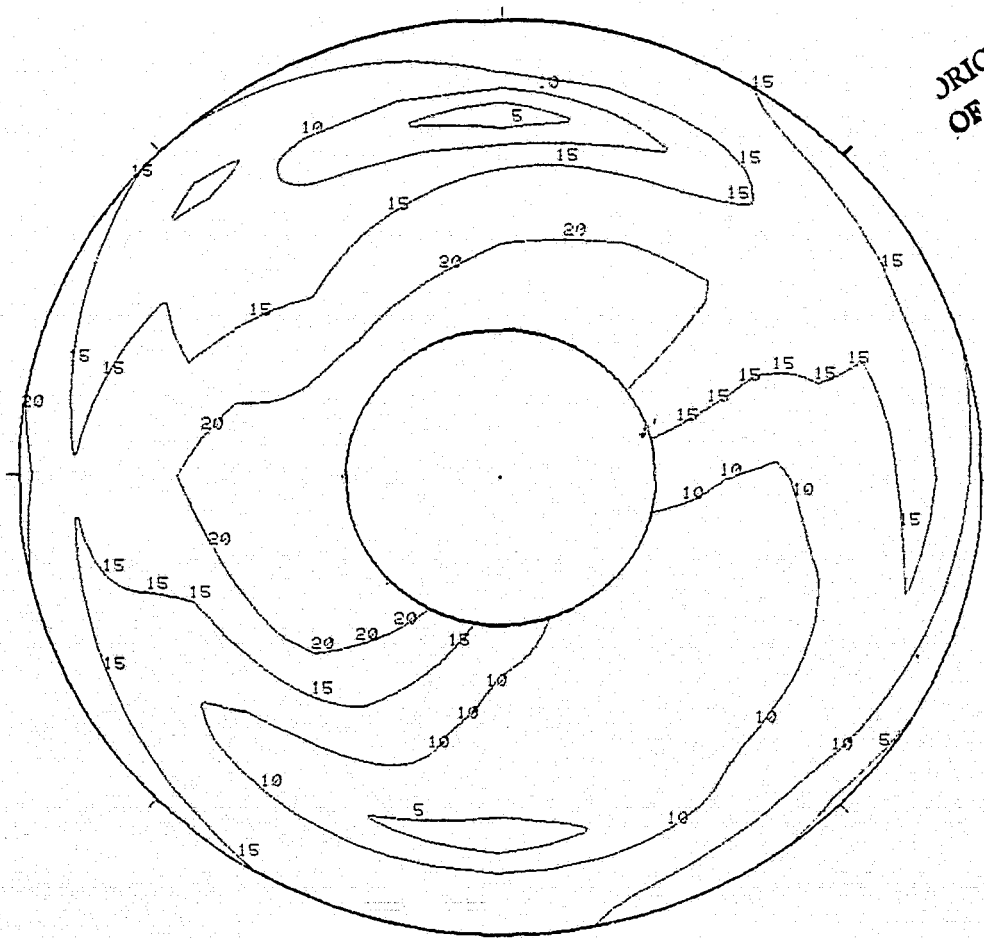
FIGURE G-46 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 91.0\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. 46
THE SEGMENT START TIME WAS AT 1:57:27.069

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
1.3	-2	0	-3.0	17.4	0.0	91.0%	-17.6

46(m) Turbulence Contour 1040 Hz



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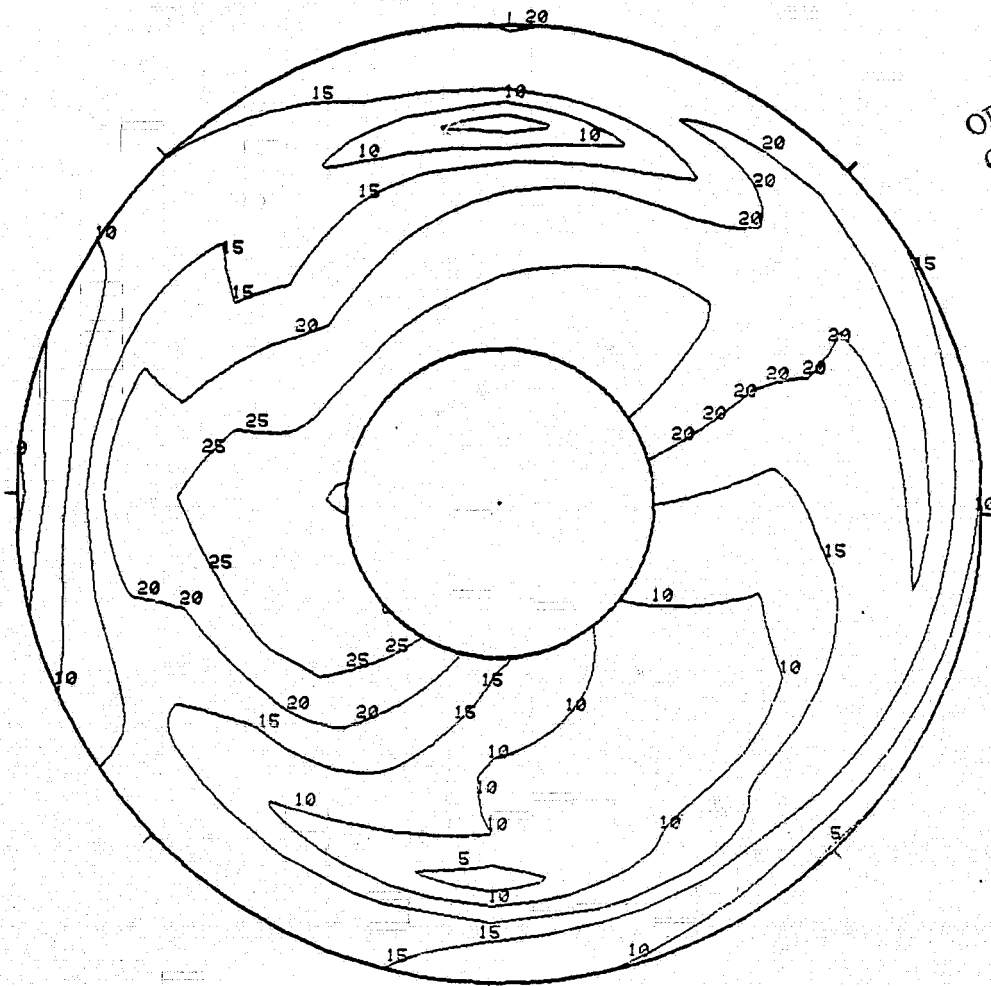
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01362
FIGURE G-46 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 91.0 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. 46
THE SEGMENT START TIME WAS AT 1:57:37.065

MACH 1.8 ALPHA -2.0 BETA 0.0 RHO -3.0 DELTA3 17.0 BYPASS 0.0 WAT2 91.0% CIVV -17.6

46(n) Turbulence Contour 3070 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01645
FIGURE G-46 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 91.0\%$

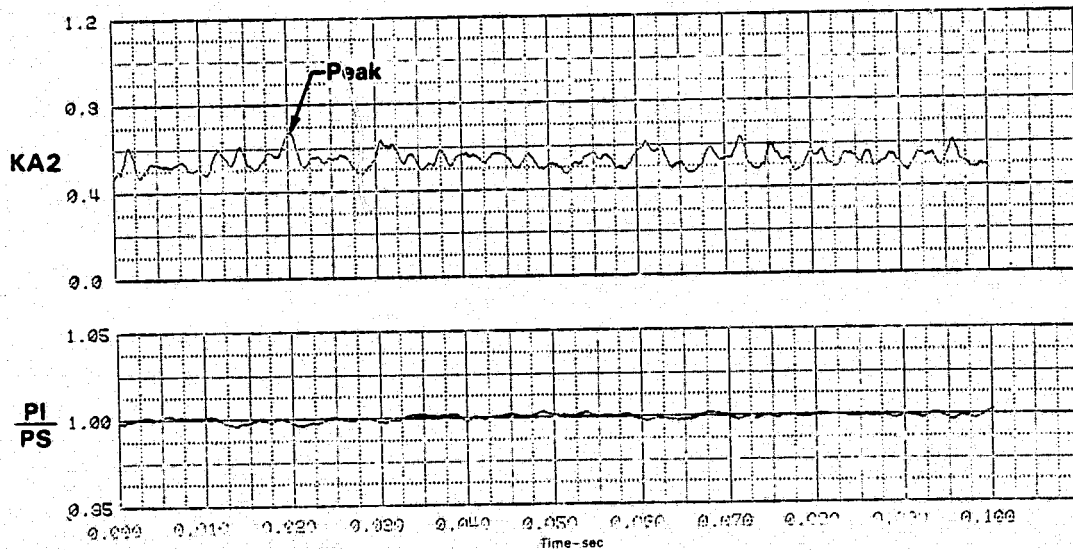
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. 46
THE SEGMENT START TIME WAS AT 1:57:37.045

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 17.4	BYPASS 0.0	WAT2 91.0%	CLV -17.6
PI 35.27 (5.116)	PI/P3 0.957	KTHETA 2.439	KRA2 0.105	BKRA2 0.245	KC2 0.376	KC2 0.481	KC2P 0.502
							D2 0.142

46(o) Time History Plots 275 Hz



PEAK AT TIME = 0.020295 SECONDS

FIGURE G-46 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 91.0%

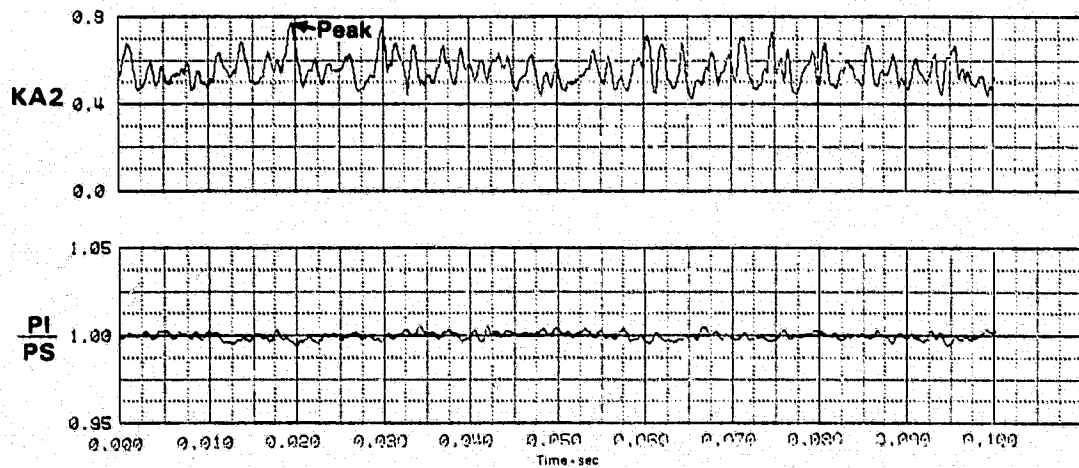
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. 46
THE SEGMENT START TIME WAS AT 1:57:37.044

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 17.4	BYPASS 0.0	WAT2 91.0%	CLVV -17.6
PI 35.24 (5.111)	PI/PS 0.996	KTHETA 0.449	KRA2 0.139	BKRA2 0.322	K22 0.772	KQ2 0.654	KQSP 0.525
							D2 0.152

46(p) Time History Plots 615 Hz



PEAK AT TIME = 0.019635 SECONDS

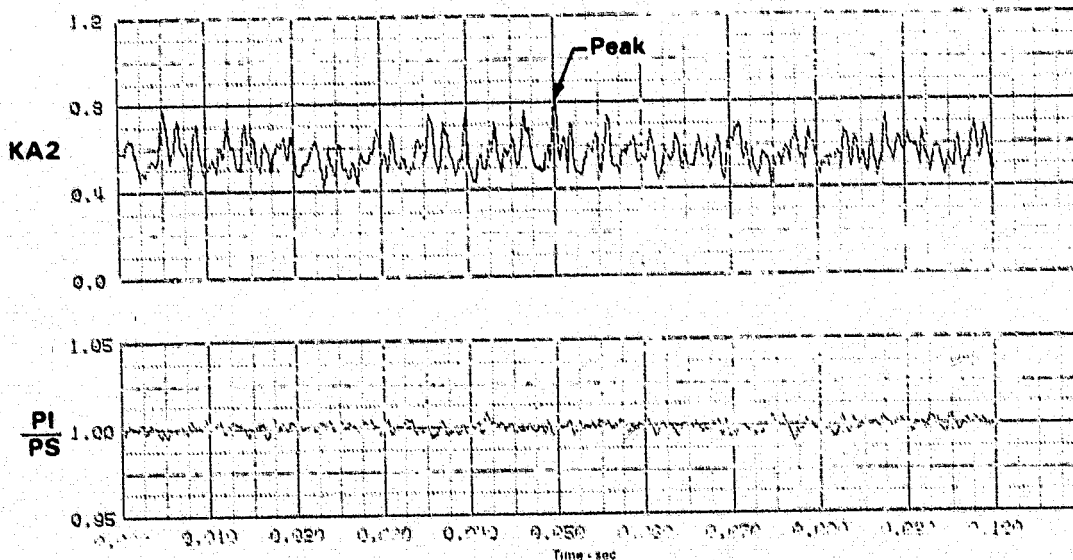
FIGURE G-46 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 91.0%

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. 46
THE SEGMENT START TIME WAS AT 1:57:27.069

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA2 17.4	BYPASS 0.0	WAT2 91.0%	QIVV -17.6
PI 35.35 (5.127)	PI/P2 0.951	KTHETA 0.484	KD22 0.151	K22 0.123	K22 0.114	K22 0.107	K22 0.102

46(q) Time History Plots
1040 Hz



PEAK AT TIME = 0.049905 SECONDS

FIGURE G-46 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 91.0%

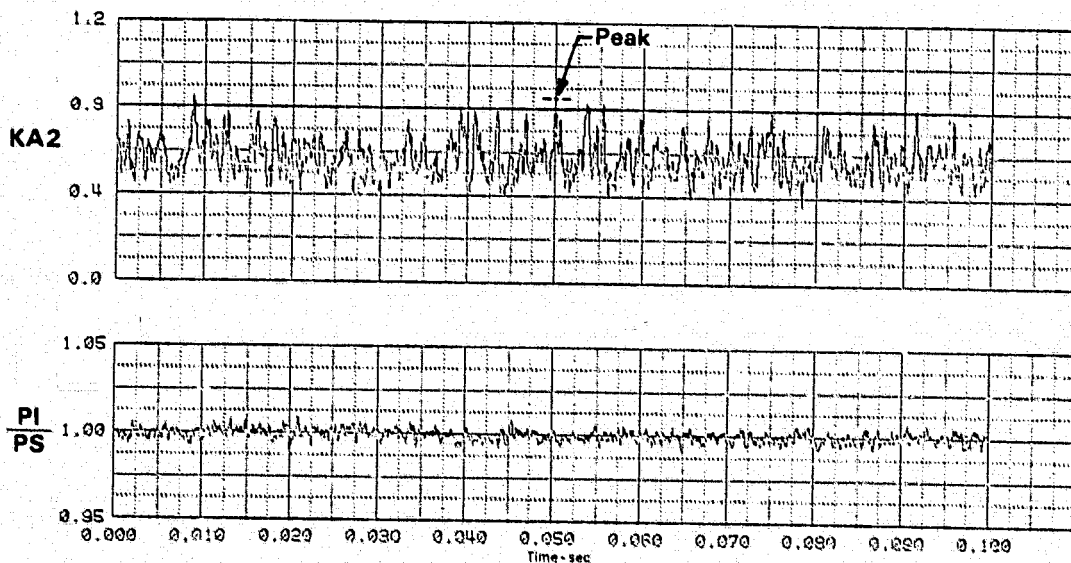
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. 46
THE SEGMENT START TIME WAS AT 1:57:37.065

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 17.4	BYPASS 0.0	WAT2 91.0%	CIVV -17.6
PI 35.32 (5.123)	PI/PS 0.999	KTHETA 0.449	KRA2 0.176	BKRA2 0.433	KK2 0.257	KC2 0.464	KOSP 0.549
							02 0.177

46(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.049995 SECONDS

FIGURE G-46 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 91.0%

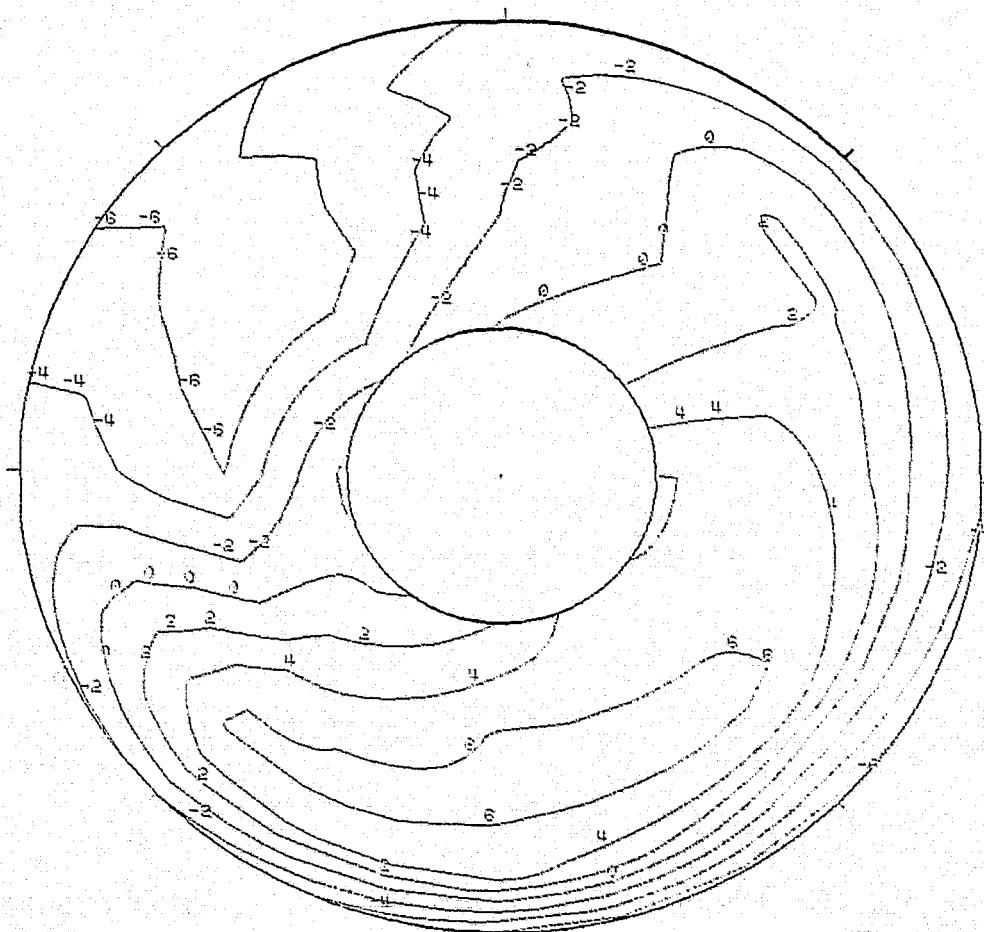
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. 46
THE SEGMENT START TIME WAS AT 1:57:37.045

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA2 17.4	BYPASS 0.0	WAT2 91.0%	Q1VV -17.6
PI 35.27 (5.116)	P1/P3 0.397	KTHETA 0.430	KRA2 0.105	BKRA2 0.245	KR2 0.576	KC2 0.431	KOSP 0.508
							D2 0.142

**46(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
275 Hz**



MEAN FACE PRESSURE = 35.27 kPa (5.116 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.020295 SECONDS

FIGURE G-46 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 91.0\%$

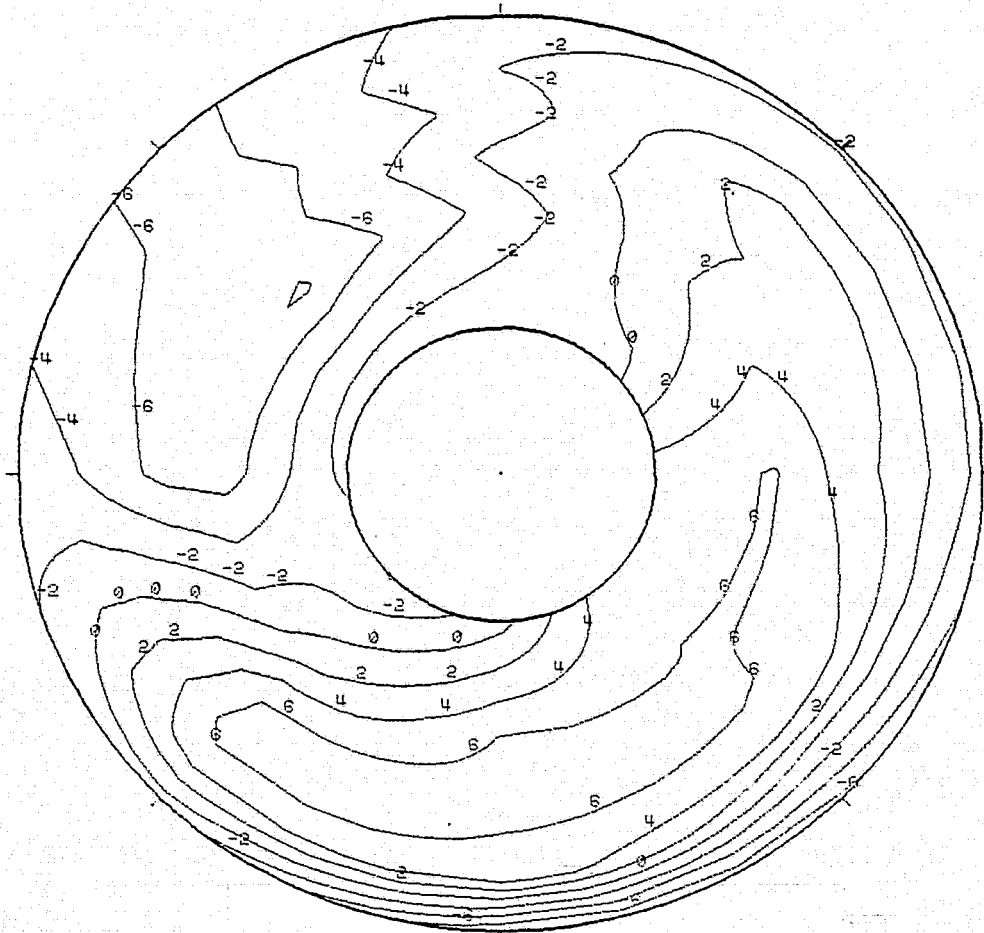
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. **46**
THE SEGMENT START TIME WAS AT 1:57:27.044

MACH 1.3	ALPHA -2	BETA 0	RHO -3.0	DELTA3 17.4	BYPASS 0.0	WAT2 91.0%	CIVV -17.6
P1 35.24 (5.111)	PI/P3 0.986	KTHETA 0.449	KRA2 0.139	BKRA2 0.322	KR2 0.772	KC2 0.454	KOSP 0.525
							OS 0.152

46(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 615 Hz



MEAN FACE PRESSURE = 35.24 kPa (5.111 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.019635 SECONDS

FIGURE G-46 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 91.0\%$

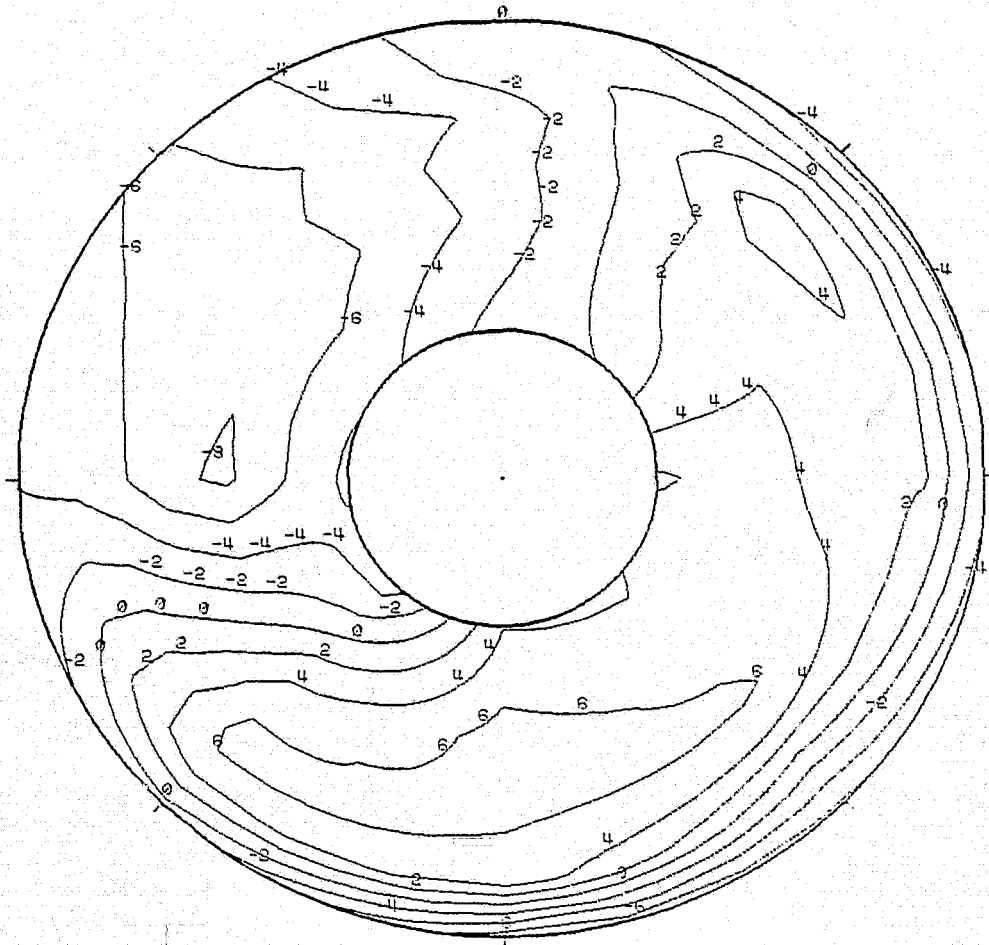
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. 46
THE SEGMENT START TIME WAS AT 1:57:37.069

MACH 1.8	ALPHA -2	BETA 0	RHO -3.9	DELTA3 17.0	BYPASS 0.0	WAT2 91.0%	CLVV -17.6
PI 35.35 (5.127)	PI/PS 0.999	KTHETA 0.484	KRA2 0.151	BKRA2 0.350	KR2 0.814	KC2 0.567	KOSP 0.562
							D3 0.152

46(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 1040 Hz



MEAN FACE PRESSURE = 35.35 kPa (5.127 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.049995 SECONDS

FIGURE G-46 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 91.0 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 15 / 5 IDENT. 46
THE SEGMENT START TIME WAS AT 1:57:37.065

MACH
1.8

ALPHA
-2

BETA
0

RHO
-3.0

DELTA3
17.4

BYPASS
0.0

WAT2
91.0%

CIVV
-17.6

P1
35.32 (5.123)

P1/PS
0.999

KTHETA
0.449

KRA2
0.176

BKRA2
0.408

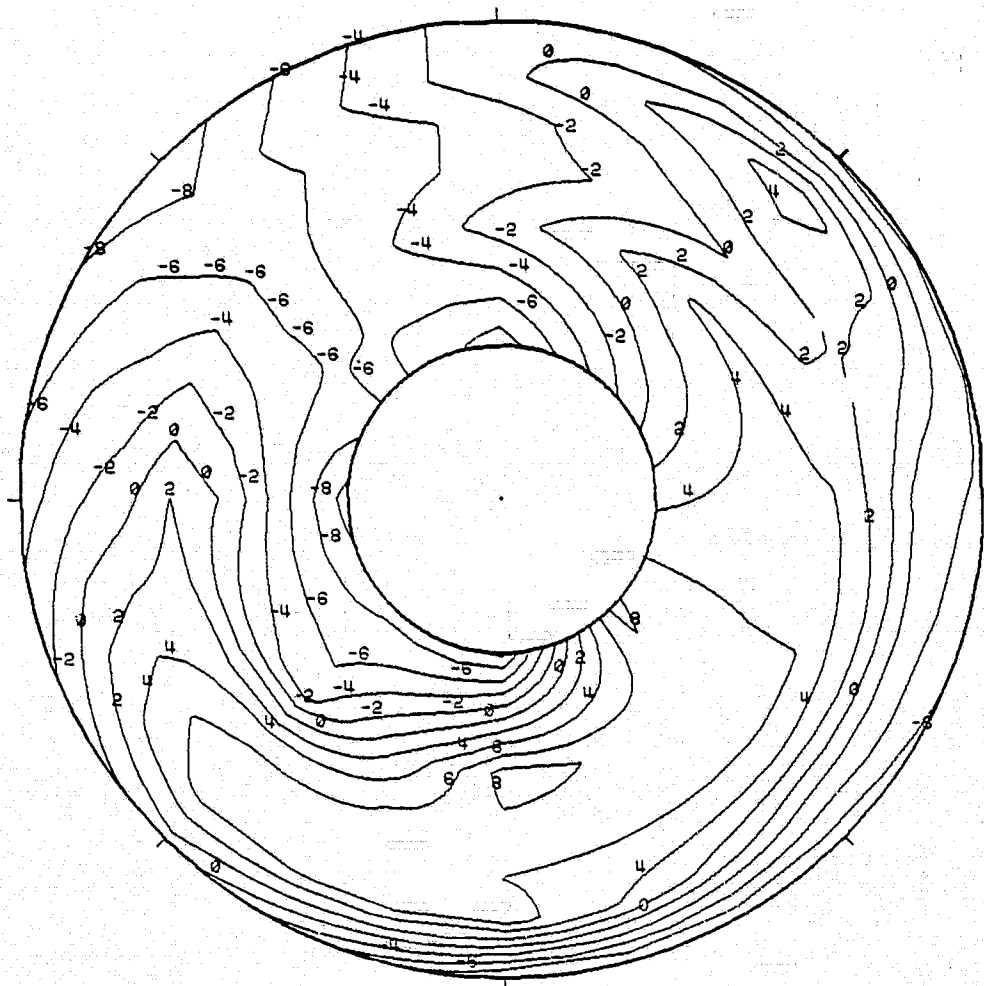
KA2
0.857

KC2
0.464

KOSP
0.549

D2
0.177

46(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
3070 Hz



MEAN FACE PRESSURE = 35.32 kPa (5.123 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.049995 SECONDS

FIGURE G-46 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 91.0 %

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FLIGHT - NASA Data Study
 Part/Point - 415/1, Ident 47
 RHO DELTA3 BYPASS CIVV
 -2.2 16.7 0.0 -25.00

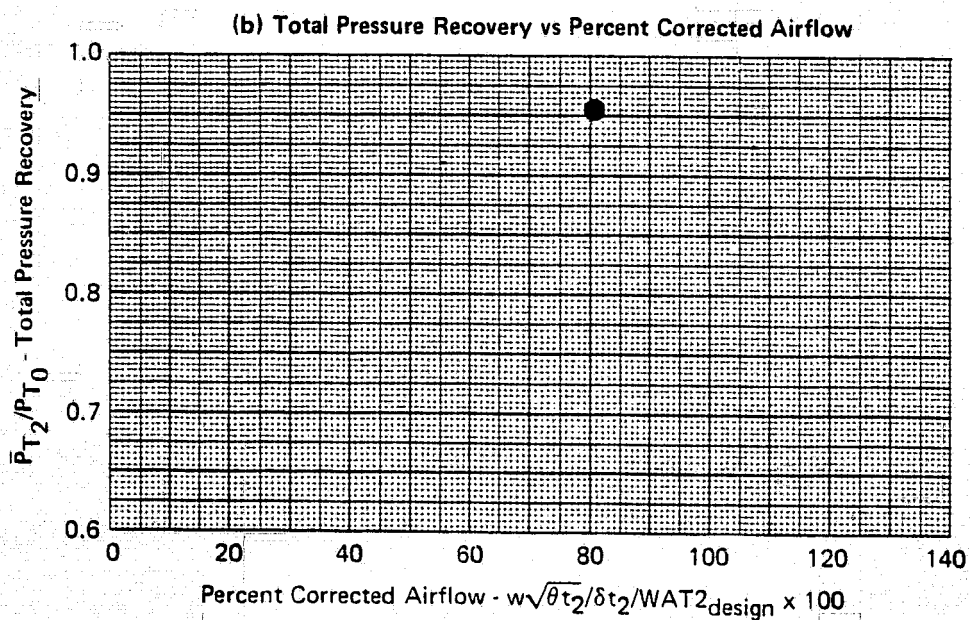
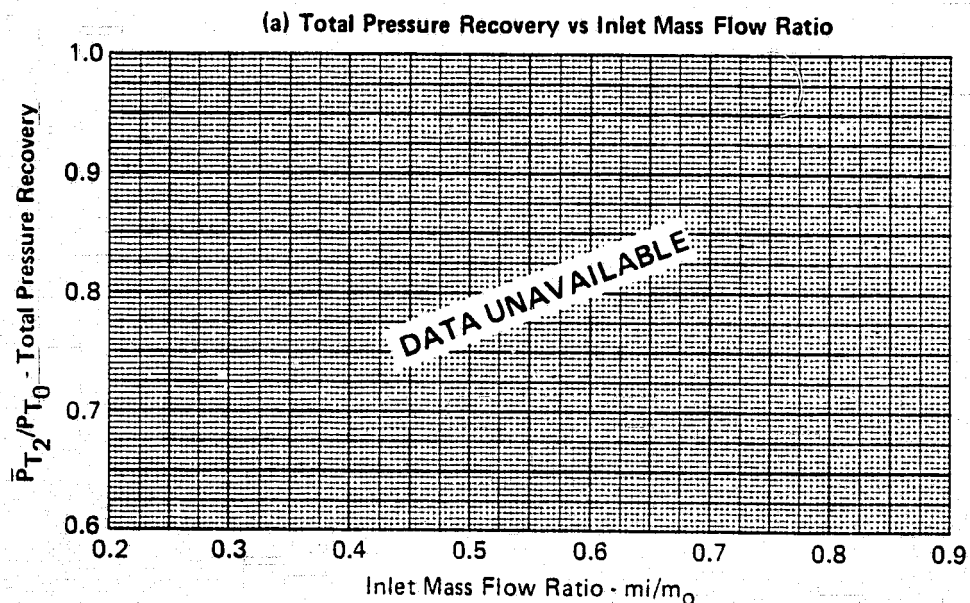
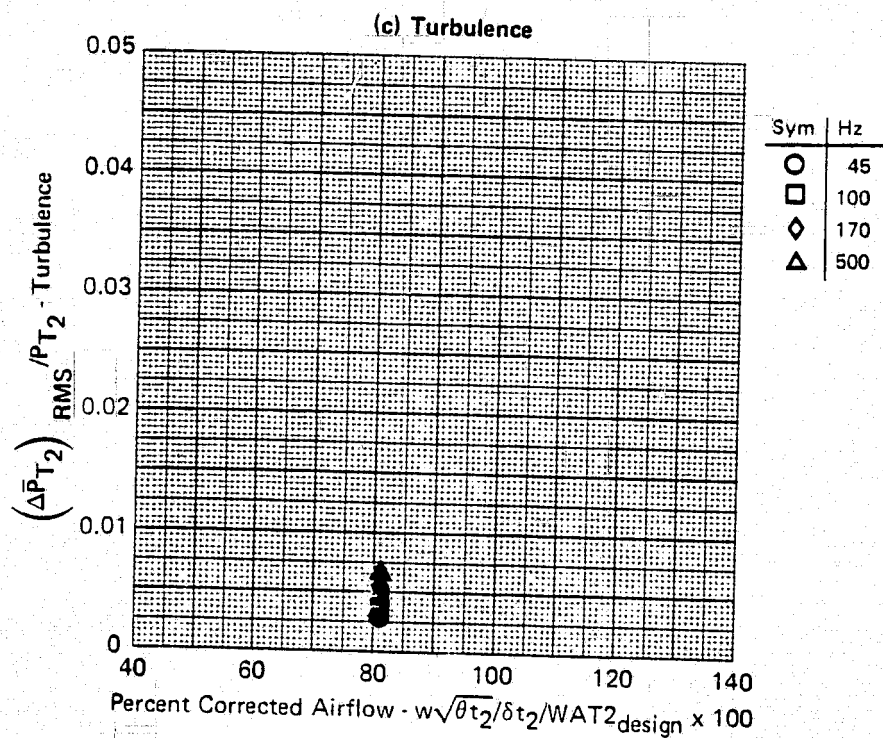


FIGURE G-47
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.75, \alpha = -2.6, \beta = 0.4, WAT2 = 80.7 \%$

GP77-0858-1

FLIGHT - NASA Data Study
 Part/Point - 415/1, Ident 47
 RHO DELTA3 BYPASS CIVV
 -2.2 16.7 0.0 -25.00

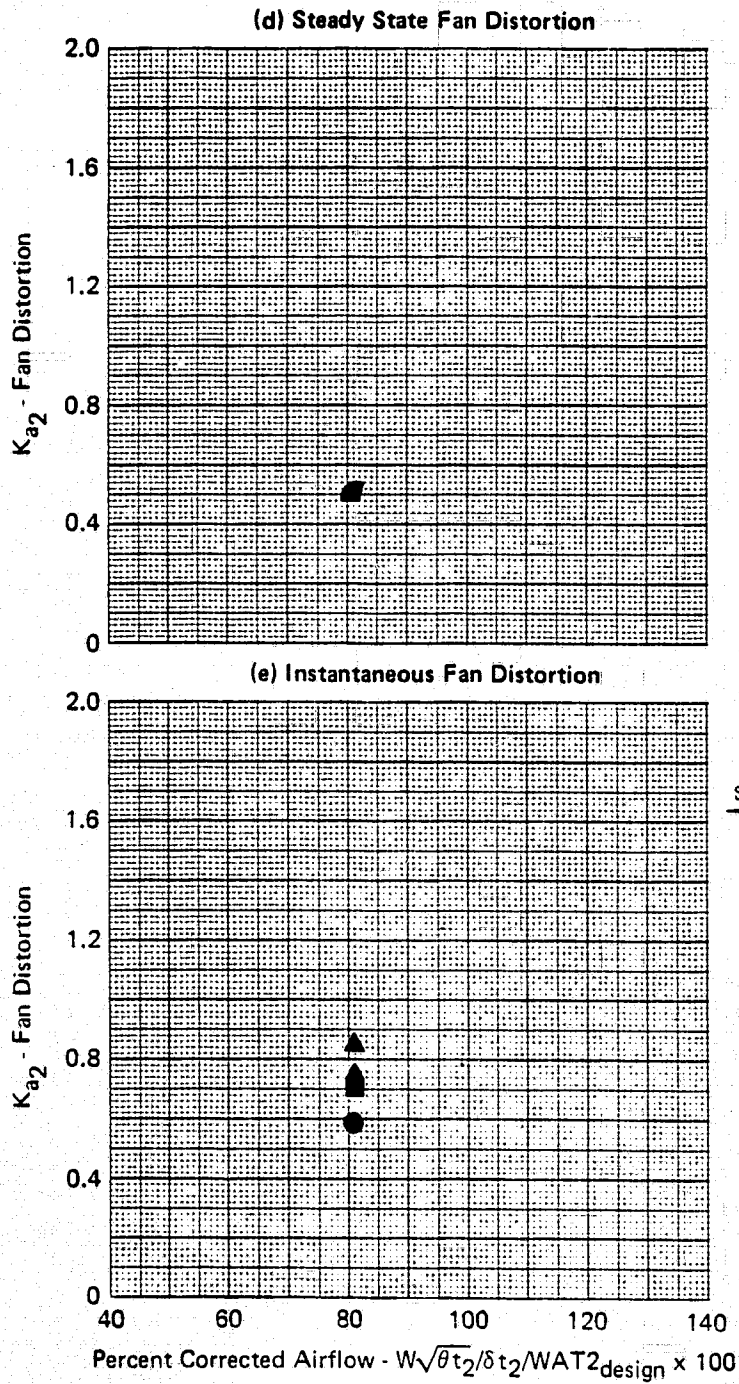


GP77-0658-5

FIGURE G-47 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, $WAT2 = 80.7\%$

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FLIGHT - NASA Data Study
 Part/Point - 415/1, Ident 47
 RHO DELTA3 BYPASS CIVV
 -2.2 16.7 0.0 -25.00



GP77-0658-3

FIGURE G-47 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, $WAT2 = 80.7\%$

FLIGHT - NASA Data Study
 Part/Point - 415/1, Ident 47
 RHO DELTA3 BYPASS CIVV
 -2.2 16.7 0.0 -25.00

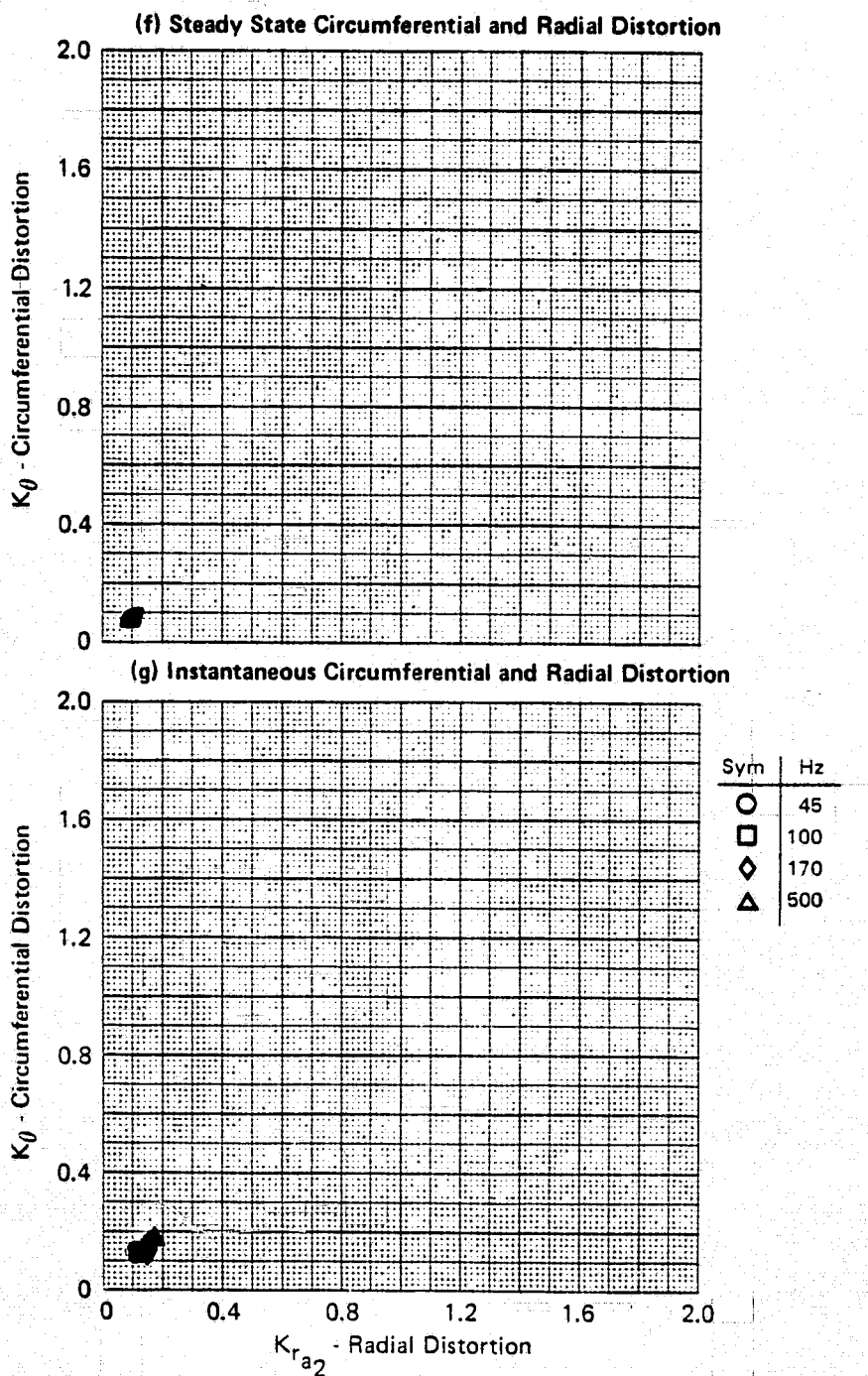


FIGURE G-47 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.75, \alpha = -2.6, \beta = 0.4, WAT2 = 80.7 \%$

FLIGHT - NASA Data Study
 Part/Point - 415/1, Ident 47
 RHO DELTA3 BYPASS CIVV
 -2.2 16.7 0.0 -25.0

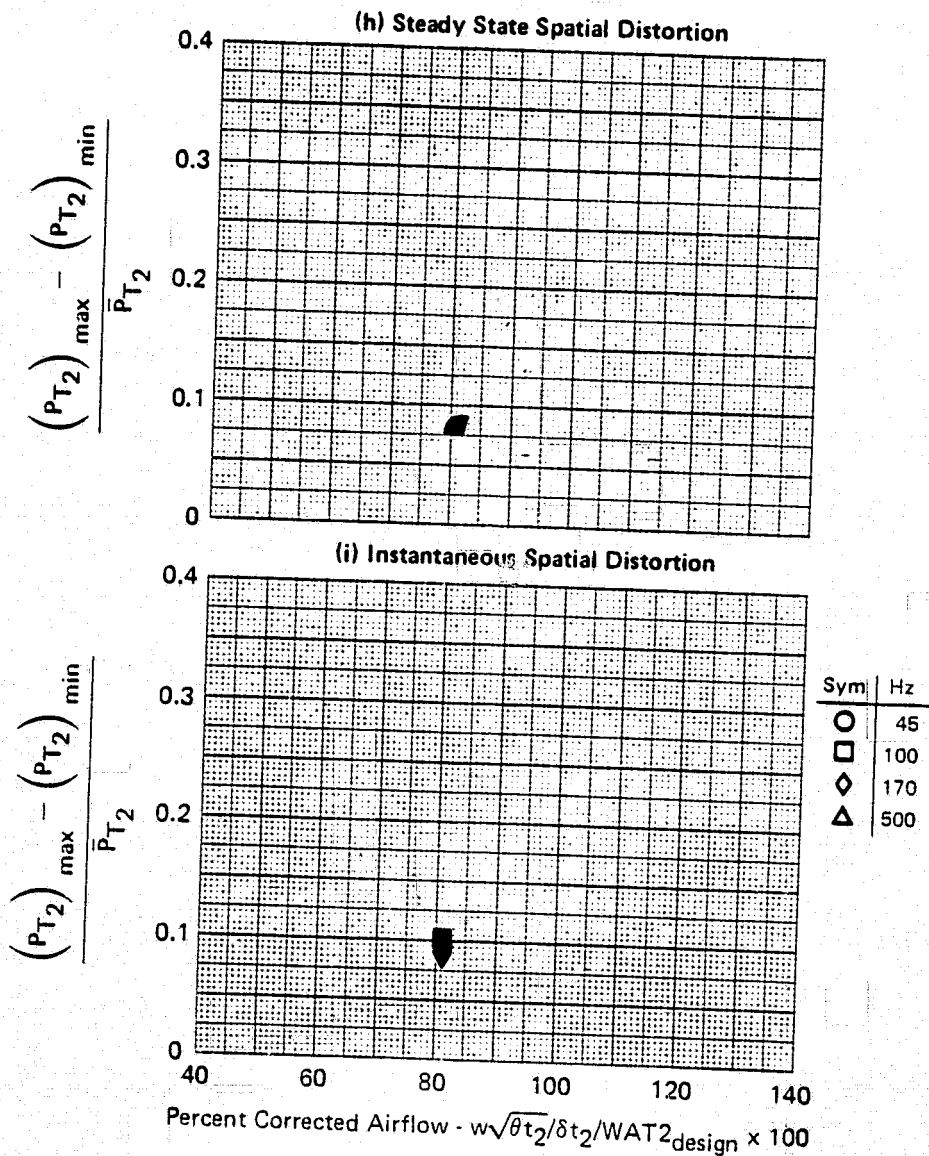


FIGURE G-47 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, $WAT2 = 80.7\%$

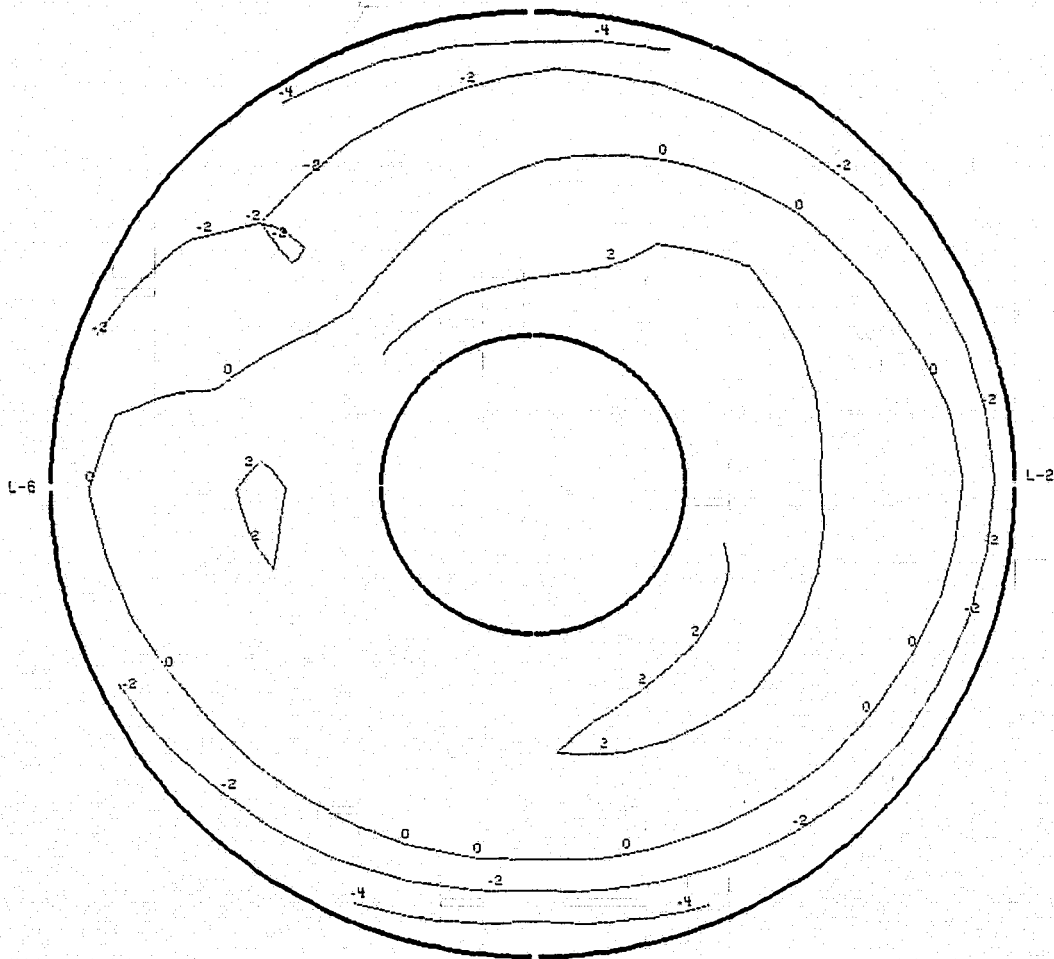
GP77-0658-4

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 415/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21:47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17847(58552)	-2.2	16.7	0.0	80.7%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	K05P	D2
39.22 (5.688)	1.0	.0856	.1075	.4188	.5053	.0867	—	.0825

47 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 39.22 kPa (5.688 PSIA)

NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

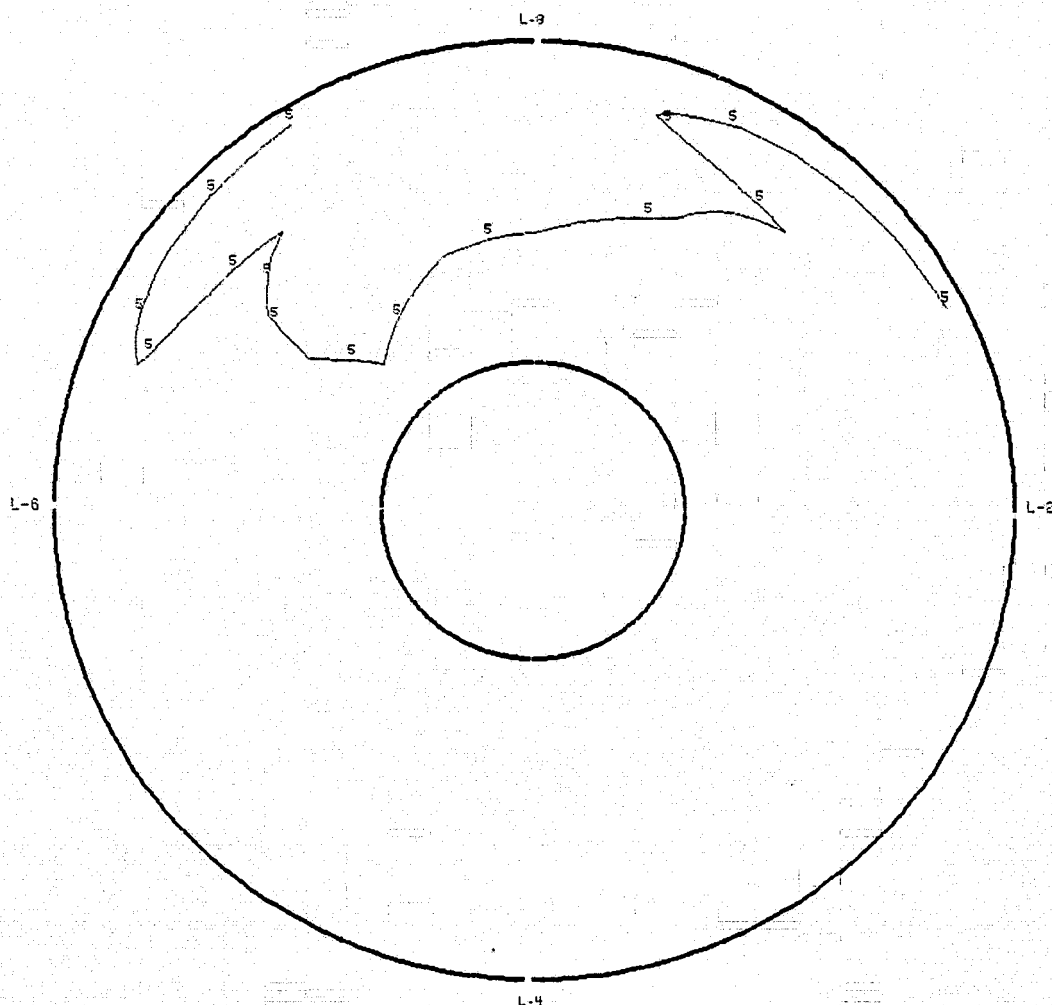
FIGURE G-47 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, $WAT2 = 80.7\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 415/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21:47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17847 (58552)	-2.2	16.7	0.0	80.7%	-25.00

47 (k) Turbulence Contour
45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT

AVERAGE TURBULENCE = 0.0031

FIGURE G-47 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

$M_0 = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, WAT2 = 80.7 %

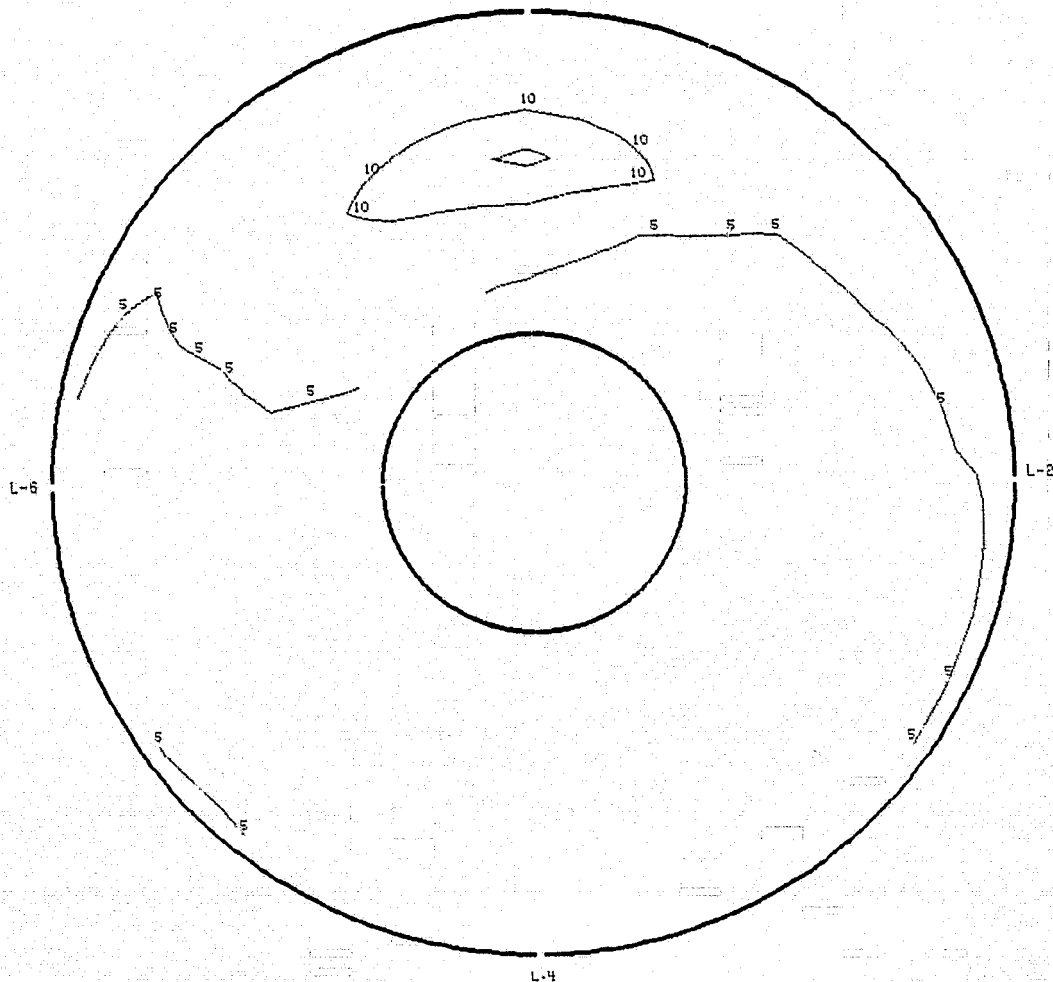
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 415/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21: 47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17847 (58552)	-2.2	16.7	0.0	80.7%	-25.00

47 (I) Turbulence Contour
100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0044

FIGURE G-47 (Continued)

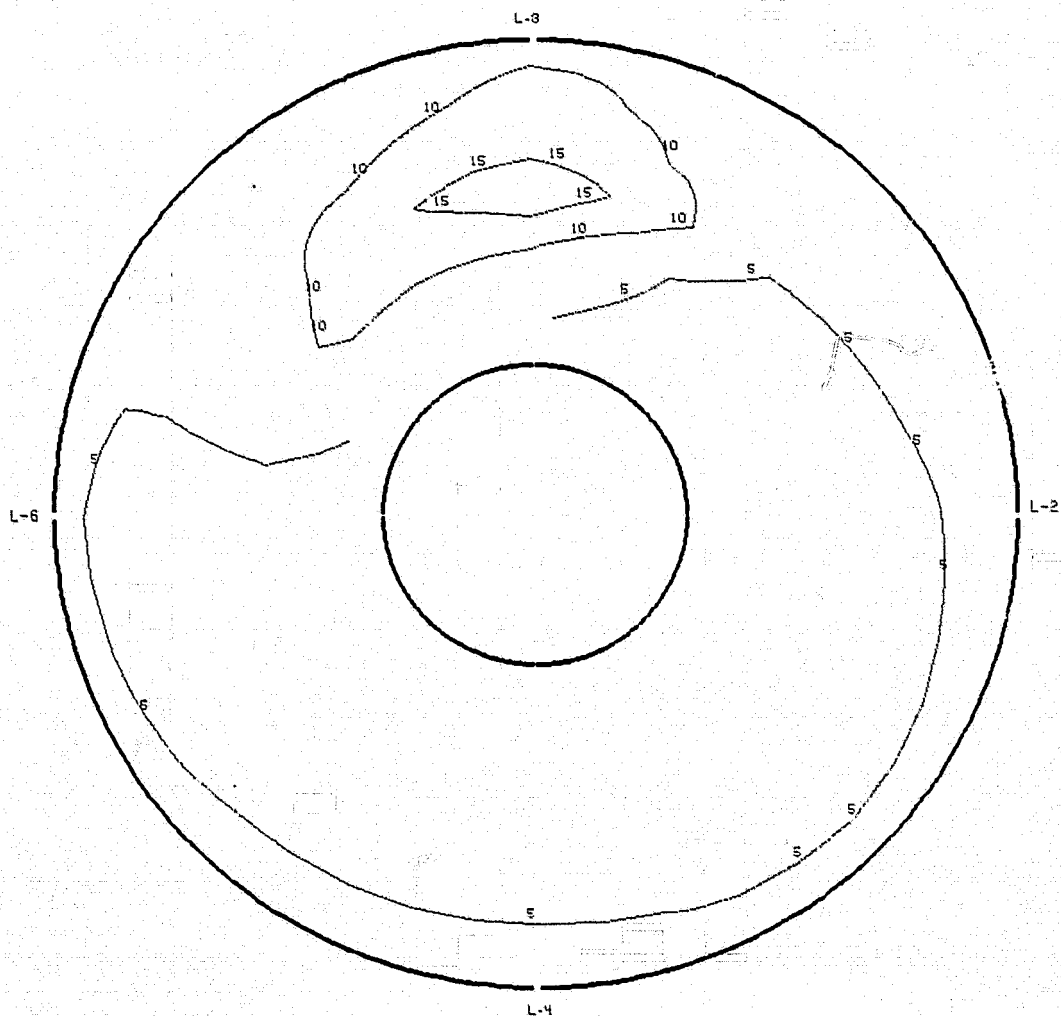
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, WAT2 = 80.7 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 415/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21:47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17847(58552)	-2.2	16.7	0.0	80.7%	-25.00

47(m) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0053

FIGURE G-47 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, $WAT2 = 80.7\%$

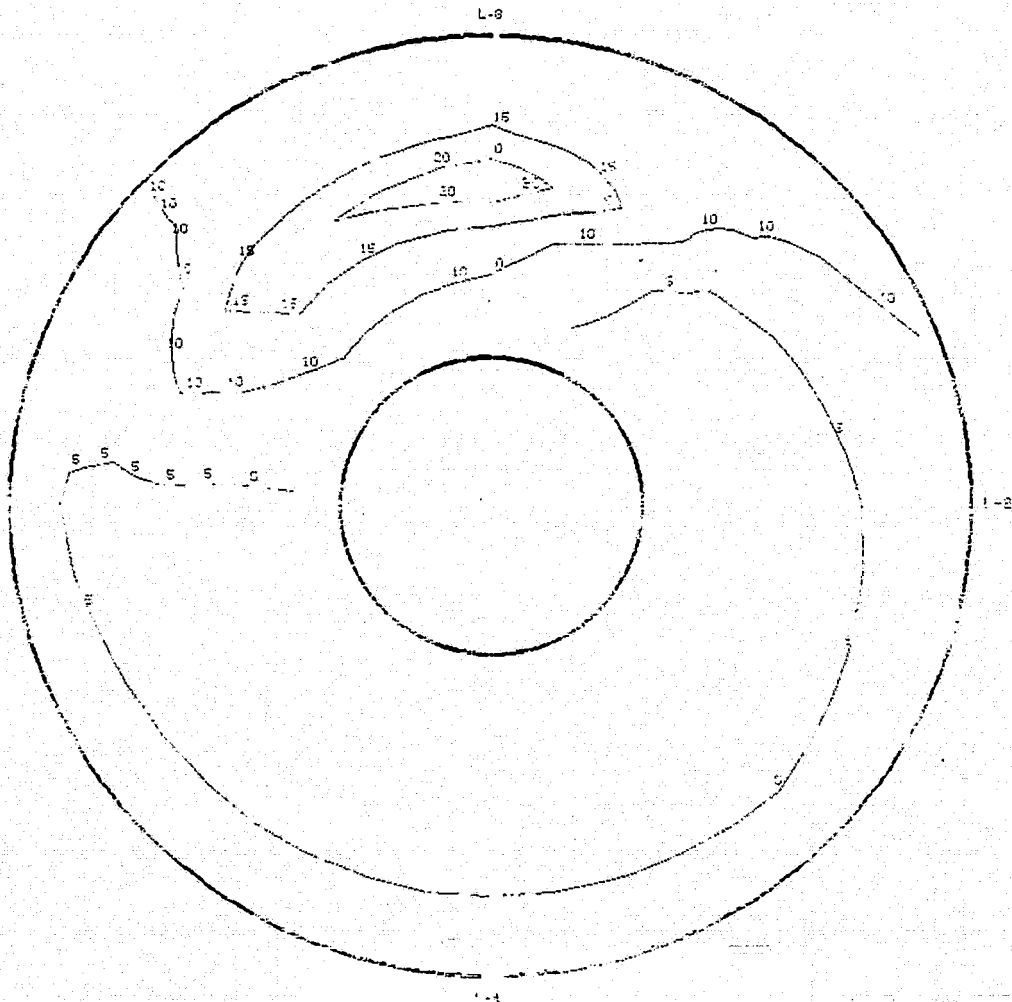
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 416/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21: 47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17847 (58552)	-2.2	16.7	0.0	80.7%	-25.00

47 (n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0067

FIGURE G-47 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

$M_o = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, $WAT2 = 80.7\%$

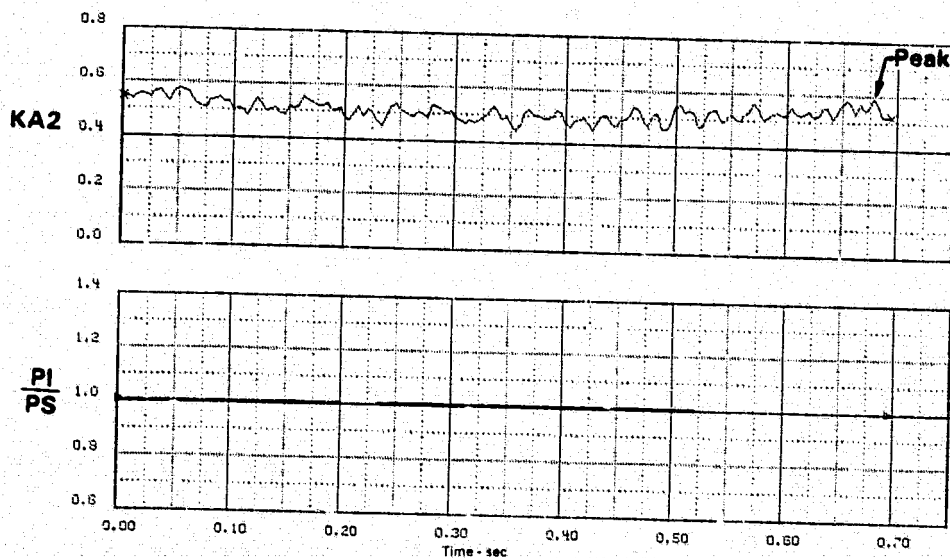
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 415/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21: 47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17844 (58542)	-2.2	16.7	0.0	80.7%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
39.30 (5.70)	1.0014	0.1399	0.1156	0.4504	0.5904	0.2081	0.1631	0.0938

47(o) Time History Plots
45 Hz



PEAK AT TIME = 0.67815 SECONDS

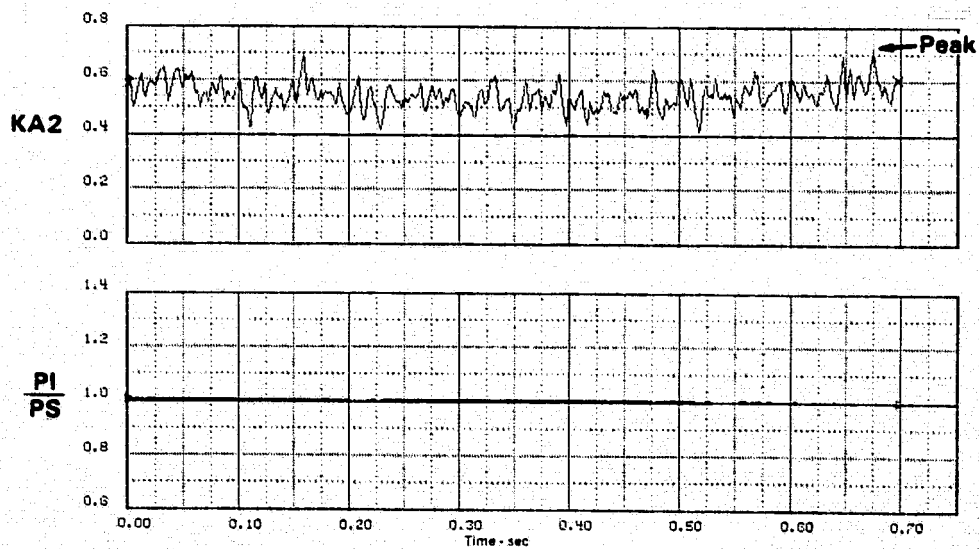
FIGURE G-47 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, $WAT2 = 80.7\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 415/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21: 47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17844 (58542)	-2.2	16.7	0.0	80.7 %	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
39.30 (5.70)	1.0021	0.1507	0.1483	0.5661	0.7167	0.2731	0.1954	0.1011

**47(p) Time History Plots
100 Hz**



PEAK AT TIME = 0.67538 SECONDS

FIGURE G-47 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, WAT2 = 80.7 %

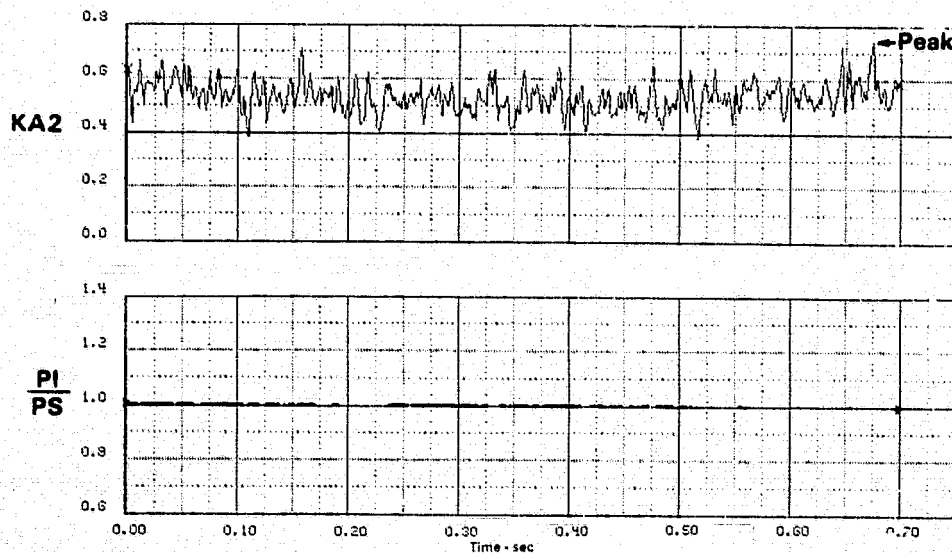
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 415/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21:47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17844(58542)	-2.2	16.7	0.0	80.7%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
39.23(5.690)	.9996	.1401	.1535	.5980	.7382	.3022	.1435	.0886

47(q) Time History Plots
170 Hz



PEAK AT TIME = 0.67454 SECONDS

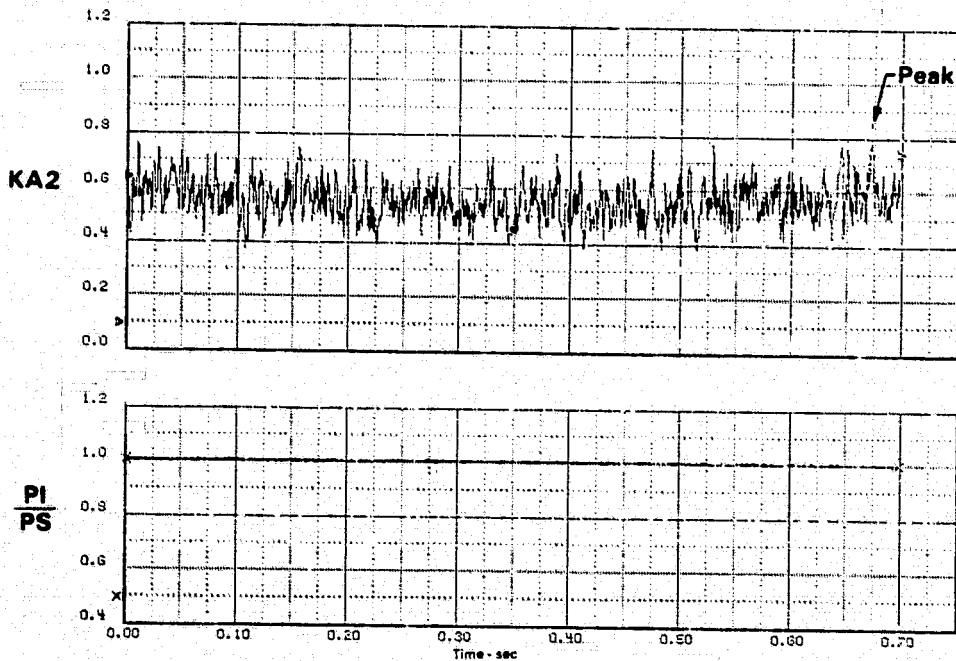
FIGURE G-47 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, $WAT2 = 80.7\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 415/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21:47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17844 (58542)	-2.2	16.7	0.0	80.7%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
39.27 (5.698)	1.0005	0.1835	0.1719	0.8697	0.8630	0.3476	0.2360	0.0961

47(r) Time History Plots
500 Hz



PEAK AT TIME = 0.67233 SECONDS

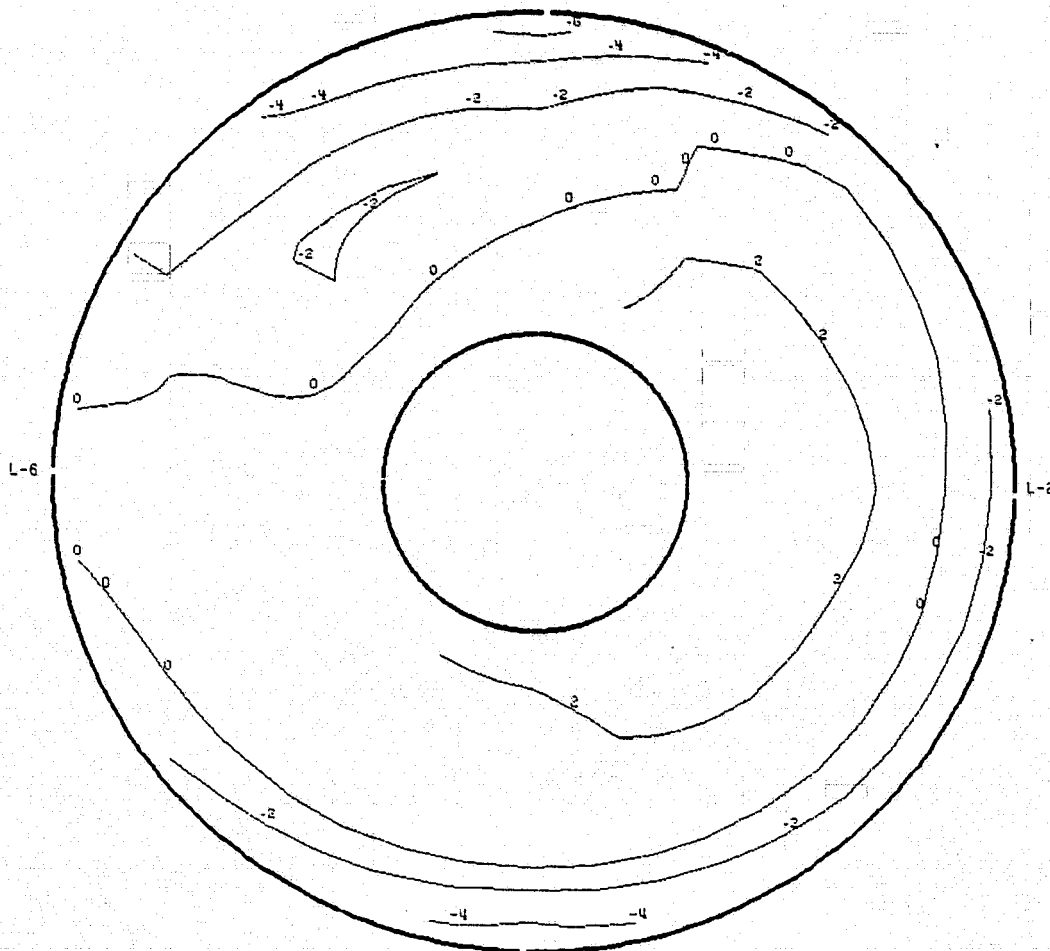
FIGURE G-47 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, WAT2 = 80.7 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 415/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21: 47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17844 (58542)	-2.2	16.7	0.0	80.7%	-28.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
39.30 (5.70)	1.0014	0.1399	0.1156	0.4504	0.6904	0.2081	0.1831	0.0938

47 (s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz



MEAN FACE PRESSURE = 39.30 kPa (5.70 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.67815 SECONDS

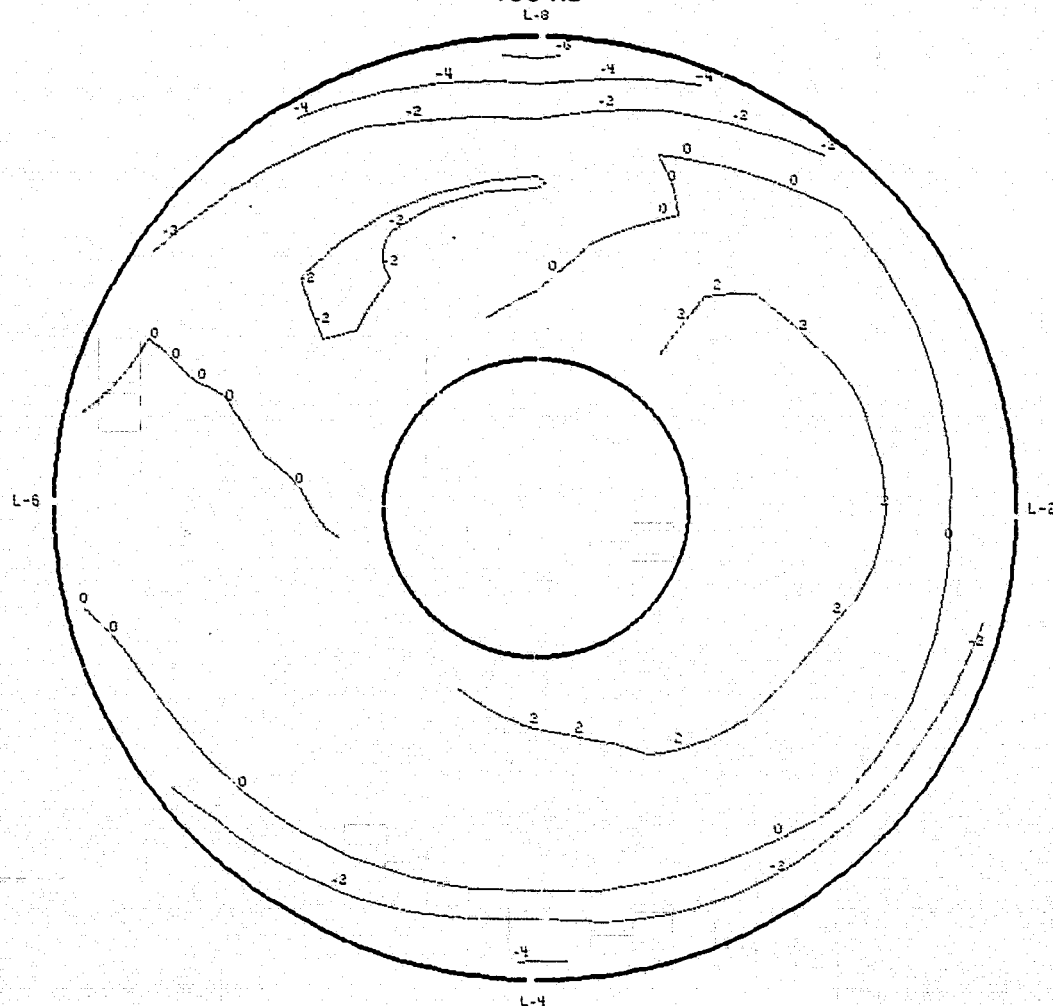
FIGURE G-47 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, $WAT2 = 80.7\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 415/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21:47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17844 (58542)	-2.2	16.7	0.0	80.7%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
39.30 (5.70)	1.0021	0.1507	0.1453	0.5661	0.7167	0.2731	0.1954	0.1011

47 (t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz



MEAN FACE PRESSURE = 39.30 kPa (5.70 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.67538 SECONDS

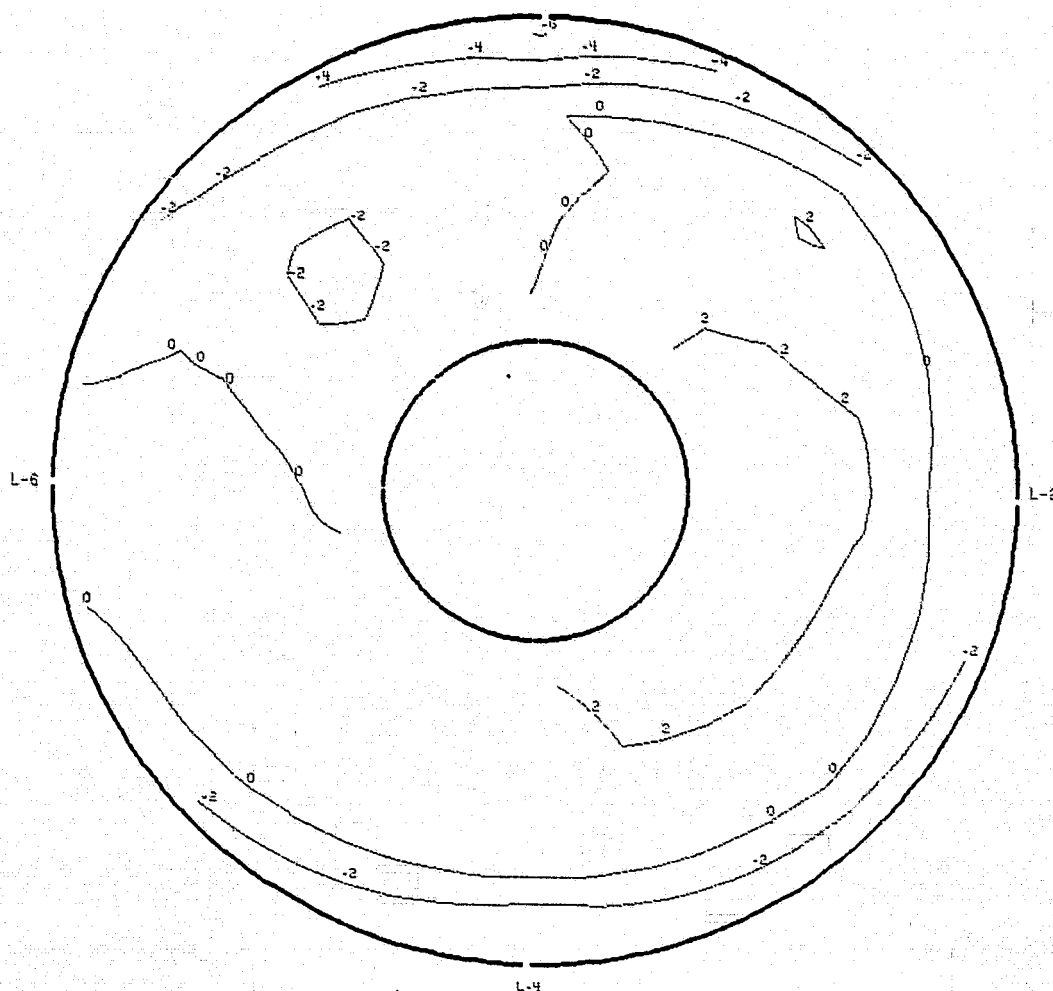
FIGURE G-47 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, $WAT2 = 80.7\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 416/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21:47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17844(58542)	-2.2	16.7	0.0	80.7%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
39.23(5.690)	.9996	.1401	.1535	.5980	.7382	.3022	.1435	.0886

47(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 39.23 kPa (5.690 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.67454 SECONDS

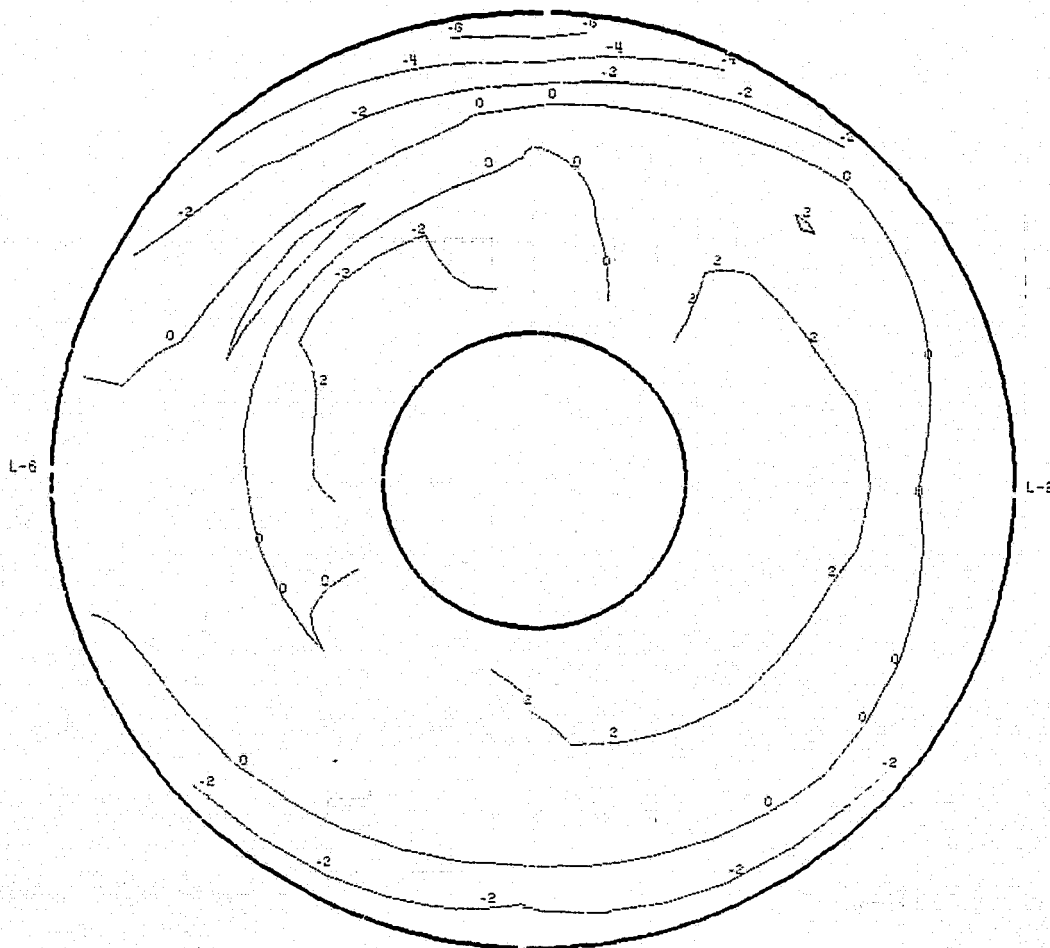
FIGURE G-47 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, $WAT2 = 80.7\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 415/1 IDENT. 47
THE SEGMENT START TIME WAS AT 20:21:47.004

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.75	-2.6	0.4	17844 (58542)	-2.2	16.7	0.0	80.7%	-25.00
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	K0SP	D2
39.27 (5.695)	1.0005	0.1835	0.1719	0.6697	0.8530	0.3476	0.2360	0.0961

47 (v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz



MEAN FACE PRESSURE = 39.27 kPa (5.695 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.67233 SECONDS

FIGURE G-47 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.75$, $\alpha = -2.6$, $\beta = 0.4$, $WAT2 = 80.7\%$

FSCP - NASA Data Study
 Part/Point - 353/15, Ident 48
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -25.00

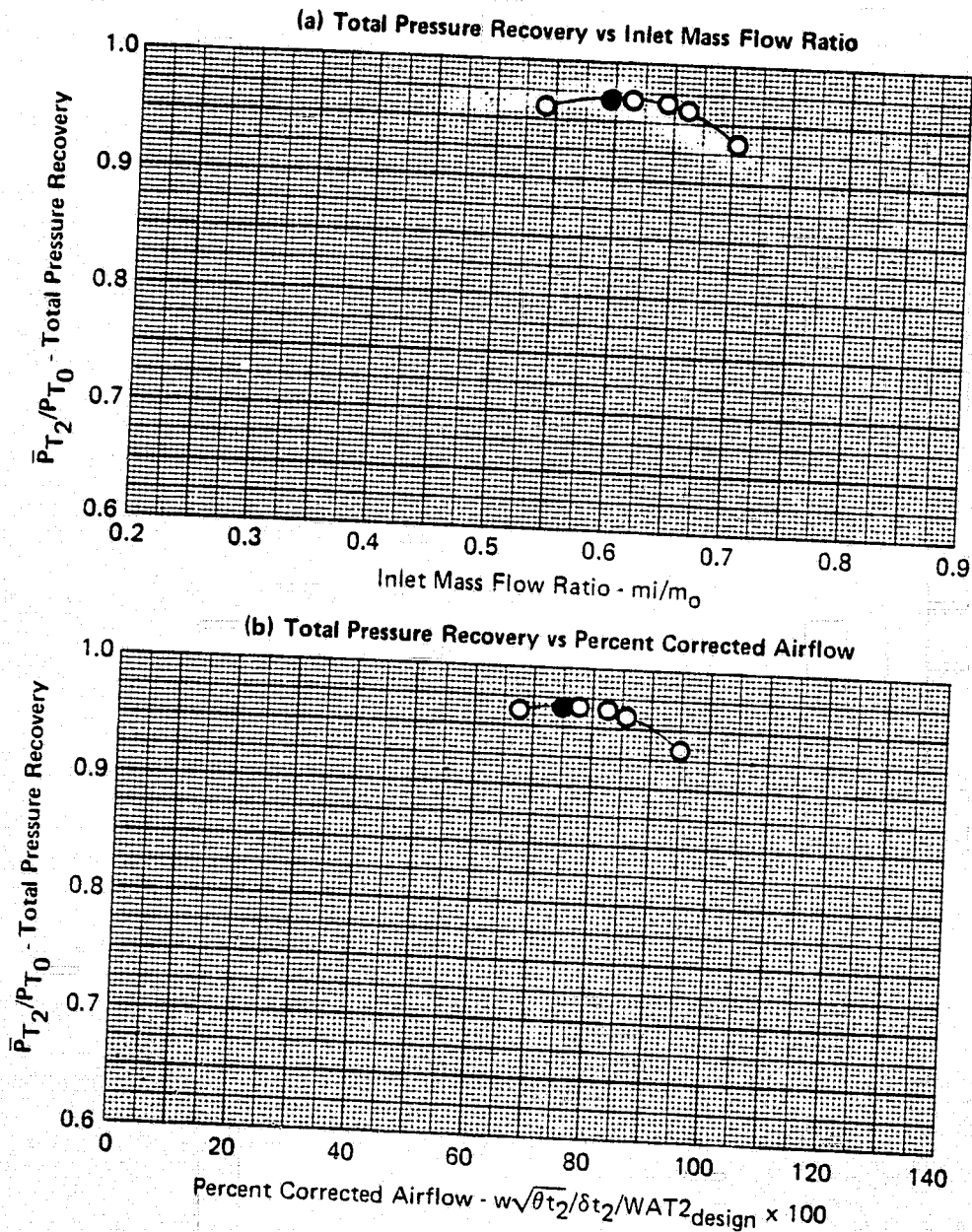
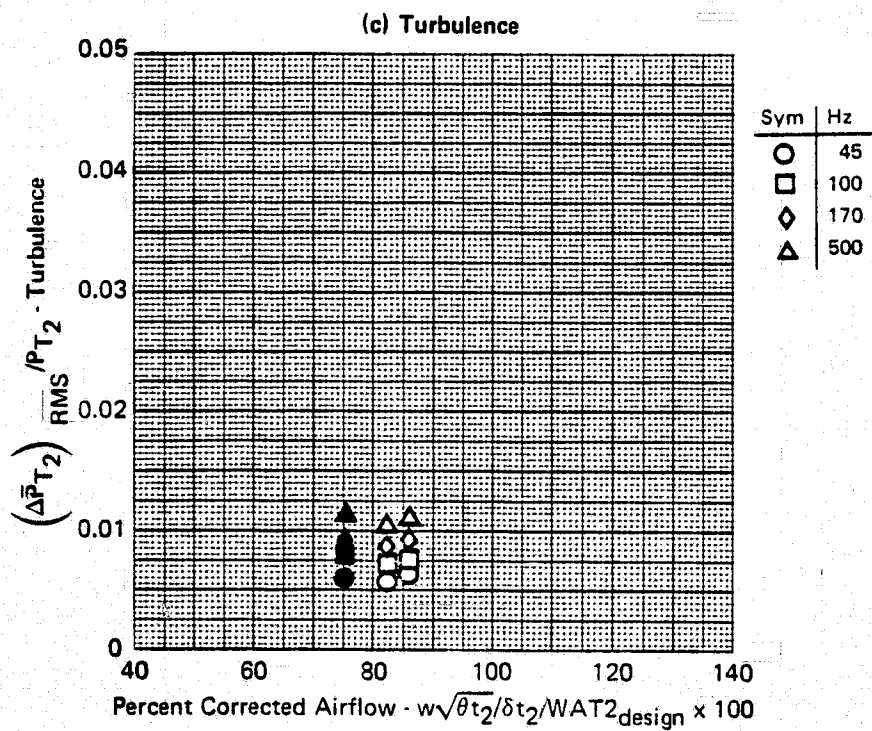


FIGURE G-48
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 75.1\%$

GP77-0658-1

FSCP - NASA Data Study
 Part/Point - 353/15, Ident 48
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -25.00



GP77-0658-5

FIGURE G-48 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 75.1\%$

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FSCP - NASA Data Study
 Part/Point - 353/15, Ident 48
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -25.00

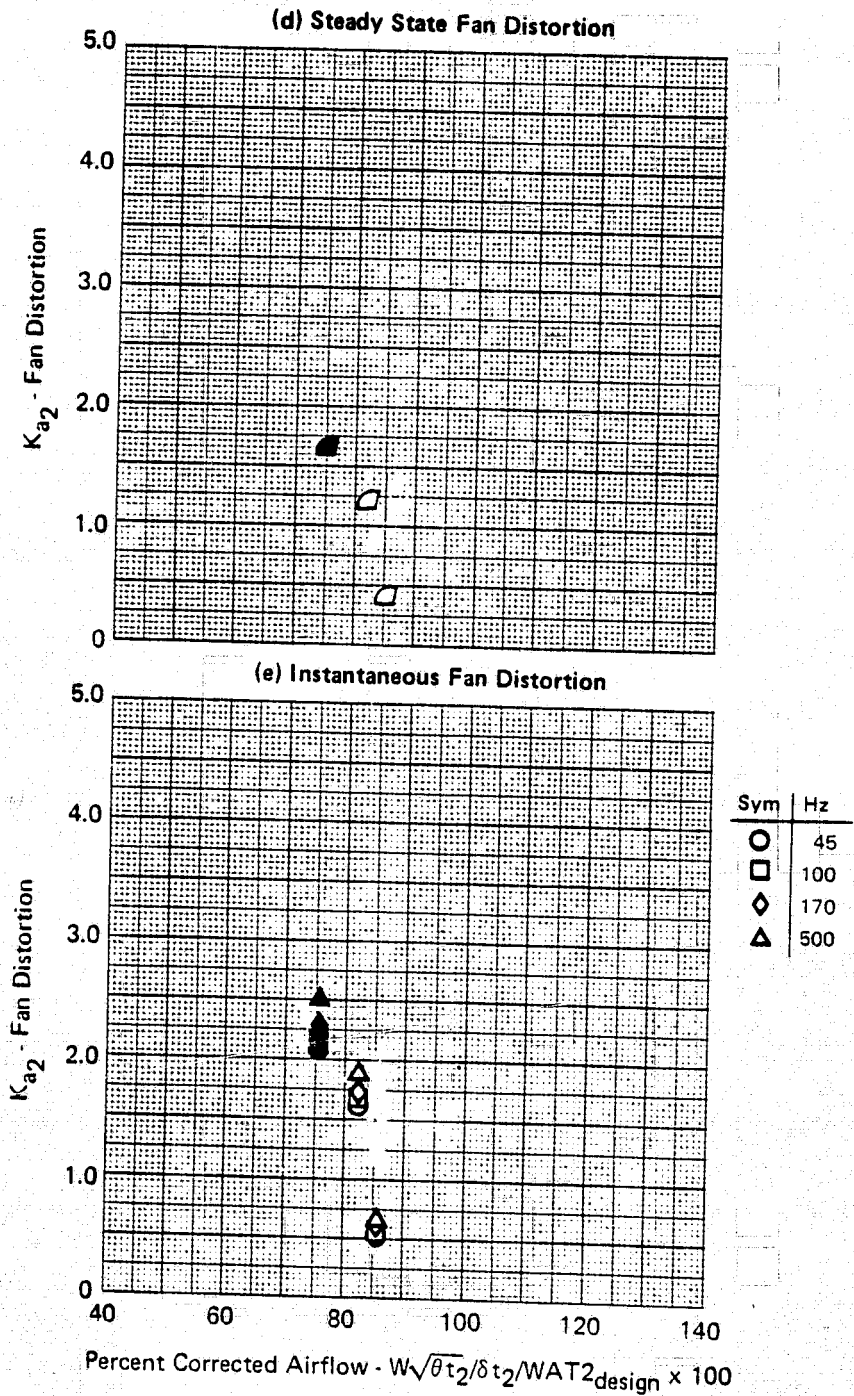
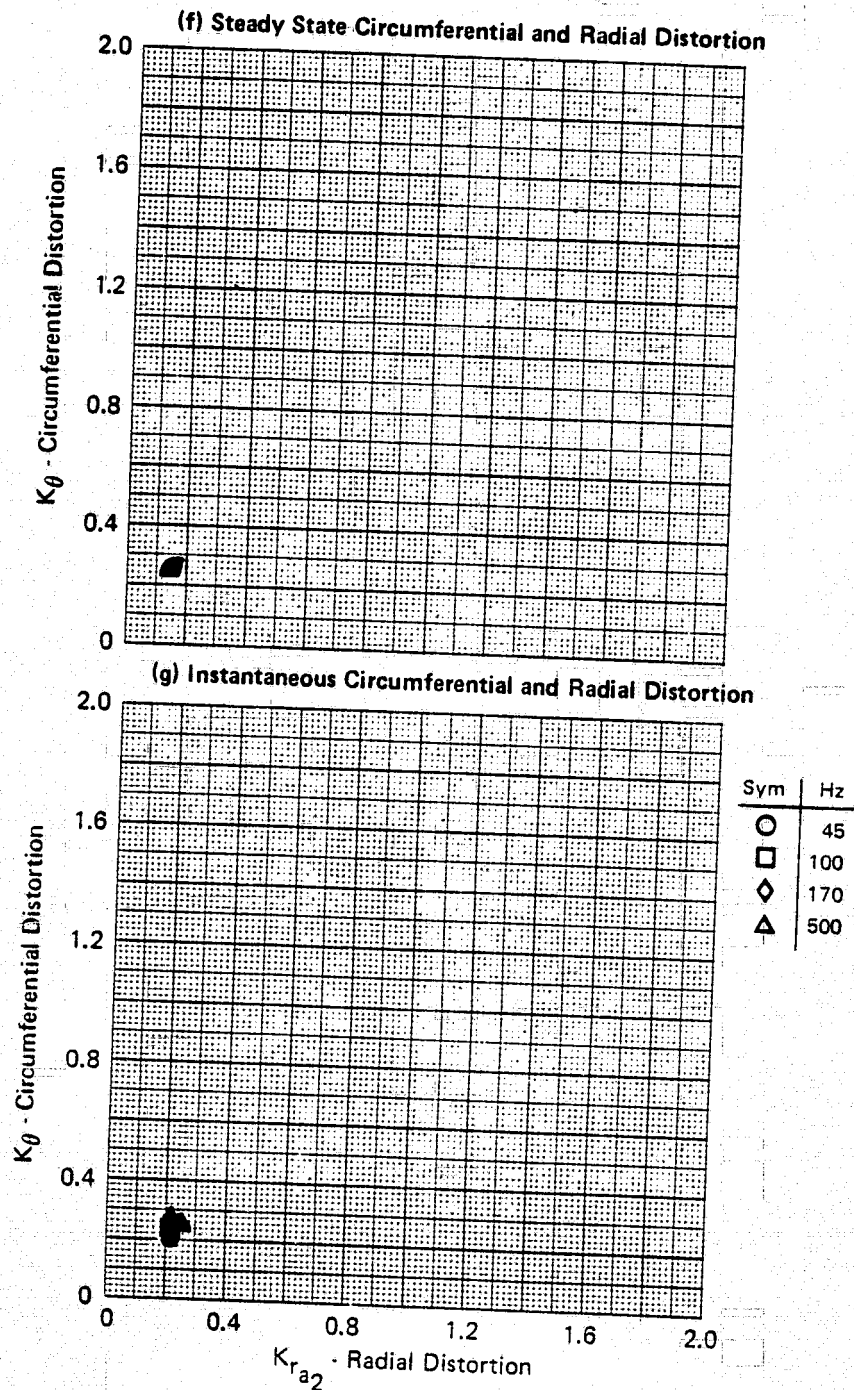


FIGURE G-48 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 75.1\%$

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FSCP - NASA Data Study
 Part/Point - 353/15, Ident 48
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -25.00



GP77-0658-2

FIGURE G-48 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 75.1 %

FSCP - NASA Data Study
 Part/Point - 353/15, Ident 48
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -25.00

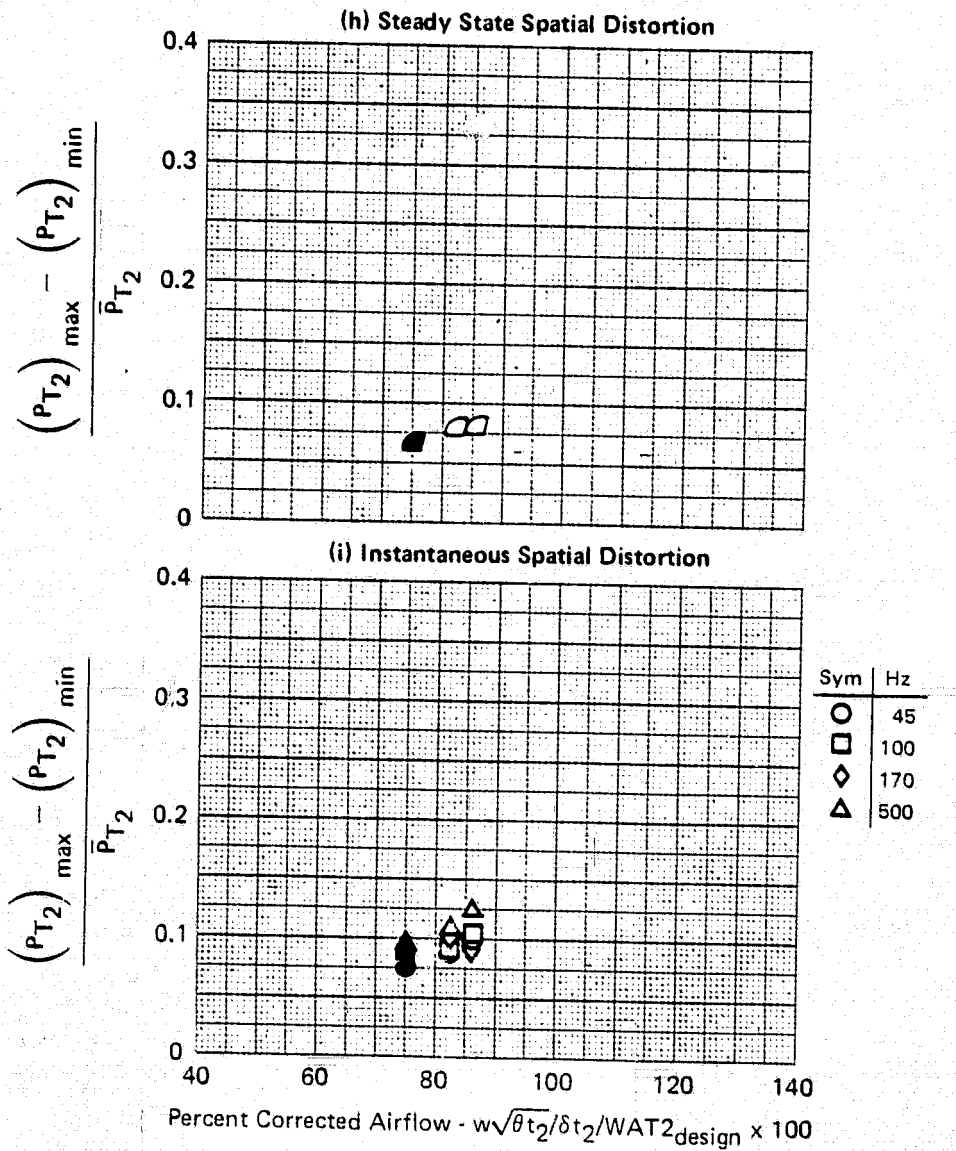


FIGURE G-48 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 75.1\%$

GP77-0658-4

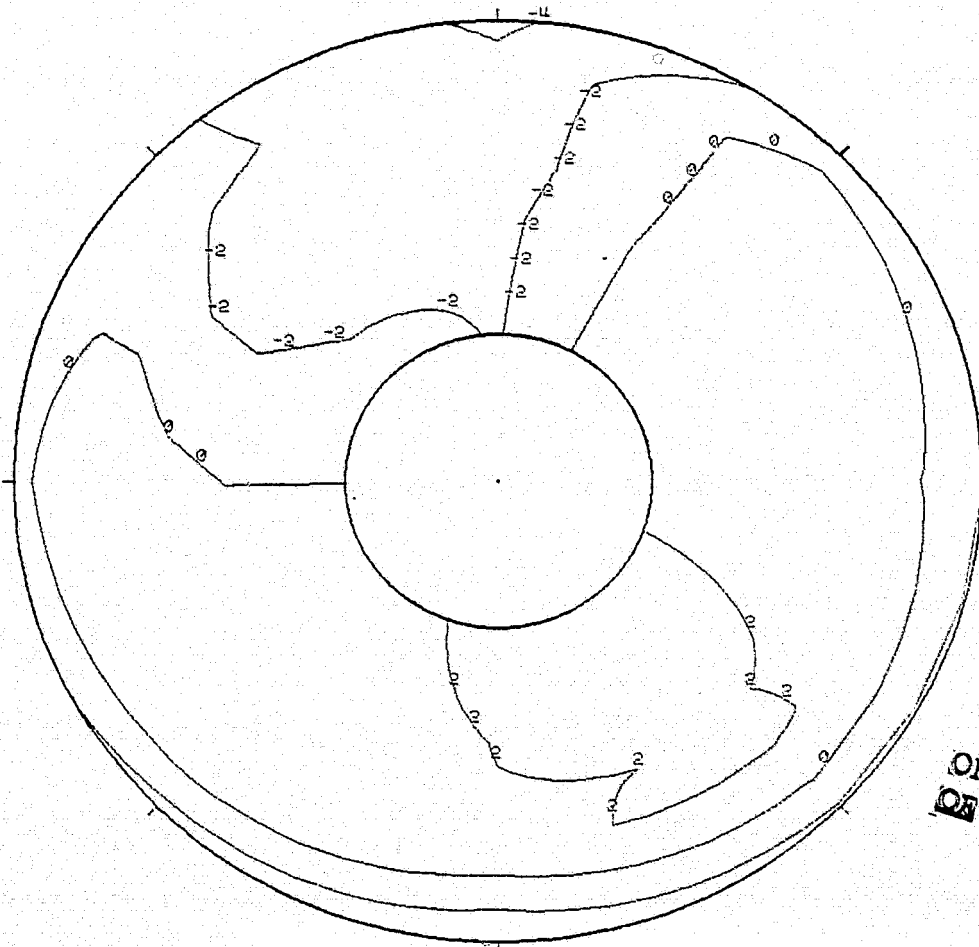
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FSCP - NASA DATA STUDY

DATA PART/POINT 353 /15 IDENT. 48
THE SEGMENT START TIME WAS AT 0:42: 2.091

MACH 1.8	ALPHA -2	BETA 0	RHO -3.9	DELTA3 18.7	BYPASS 0.0	WAT2 75.1%	CIVV -25.3
P1 44.17 (6.407)	P1/PS 1.000	KTHETA 2.251	KRA2 0.155	BKRA2 1.331	KQ2 1.231	KQ3 0.372	KASP 0.303
							D2 0.087

48 (j) Steady State Total Pressure Contour



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MEAN FACE PRESSURE = 44.17 kPa (6.407 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

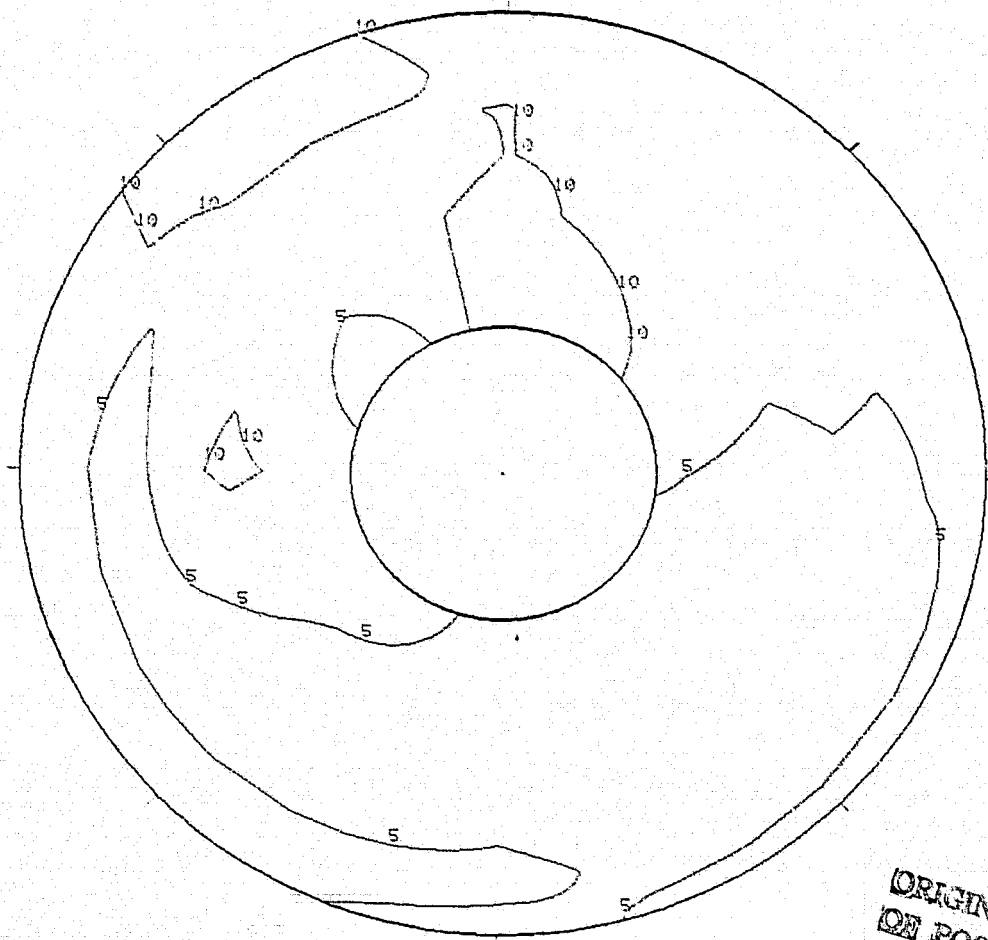
FIGURE G-48 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 75.1$ %

FSCP - NASA DATA STUDY

DATA PART/POINT 353 '15 IDENT. 48
THE SEGMENT START TIME WAS AT 0:42: 2.291

MACH	ALPHA	BETA	PHI	DELTA	BYPASS	WAT2	CIVV
1.3	-2	0	-3.0	13.7	0.0	75.1%	-35.0

48(k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00611

FIGURE G-48 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 75.1\%$

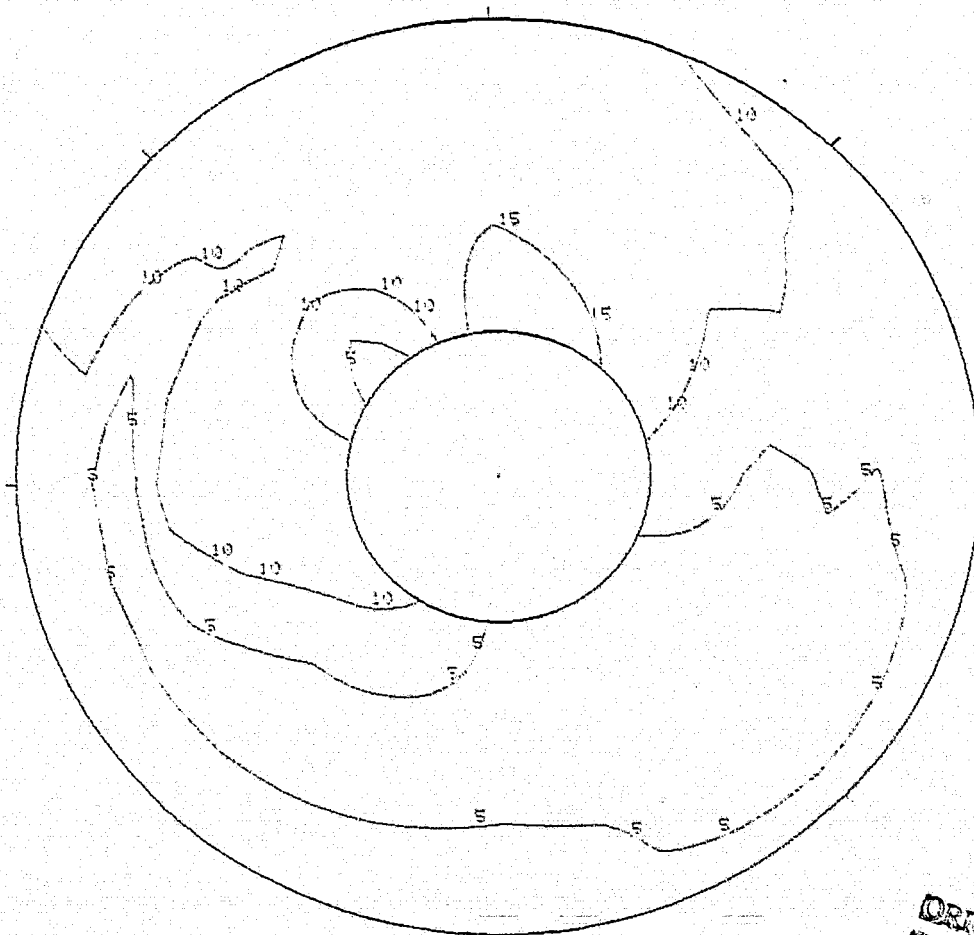
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FSCP - NASA DATA STUDY

DATA PART/POINT 253 /15 IDENT. **48**
 THE SEGMENT START TIME WAS AT 0:42: 2.170

MACH 1.8	ALPHA -2.0	BETA 0.0	PHI -3.0	DELTA 13.7	BYPASS 0.0	WAT2 75.1%	CIVV -25.0
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48(I) Turbulence Contour 100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
 AVERAGE TURBULENCE = .00804

FIGURE G-48 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 75.1\%$

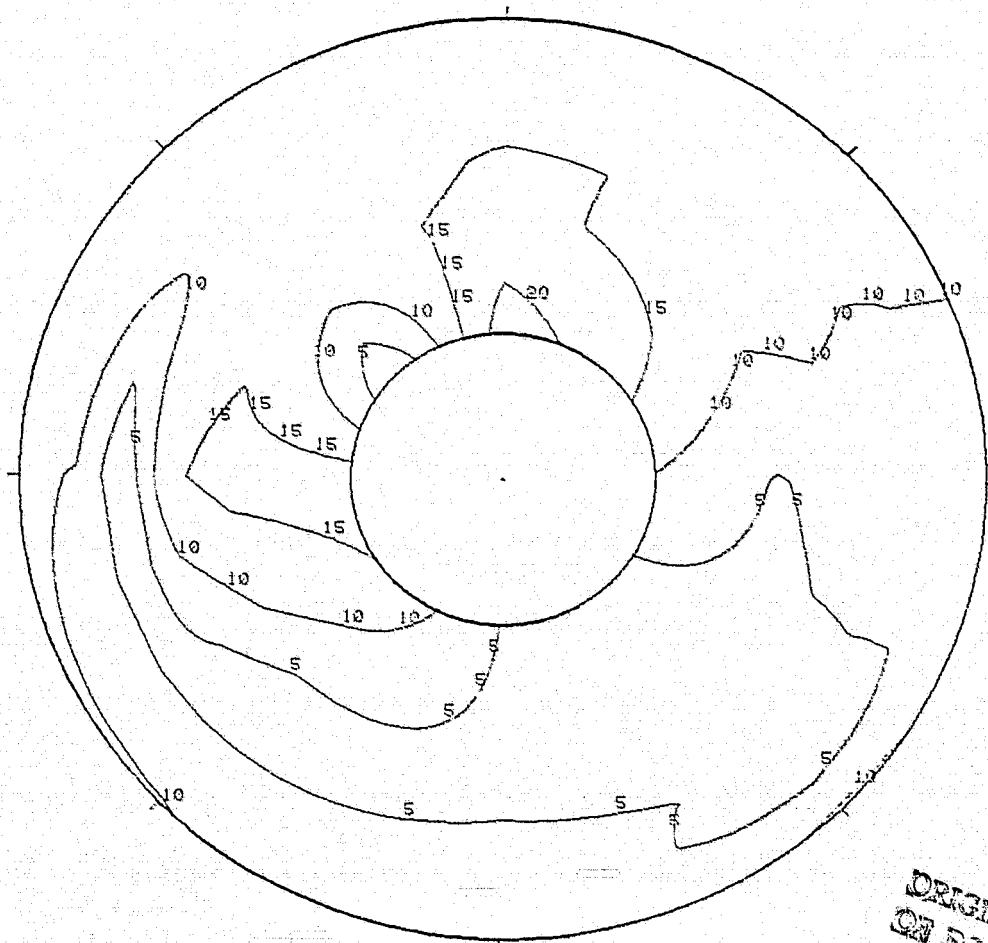
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FSCP - NASA DATA STUDY

DATA PART/POINT 353 /15 IDENT. 48
THE SEGMENT START TIME WAS AT 0:42: 2.172

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	QIVV
1.8	-2	3	-3.0	13.7	0.0	75.1%	-25.9

48(m) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00933

FIGURE G-48 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 75.1 %

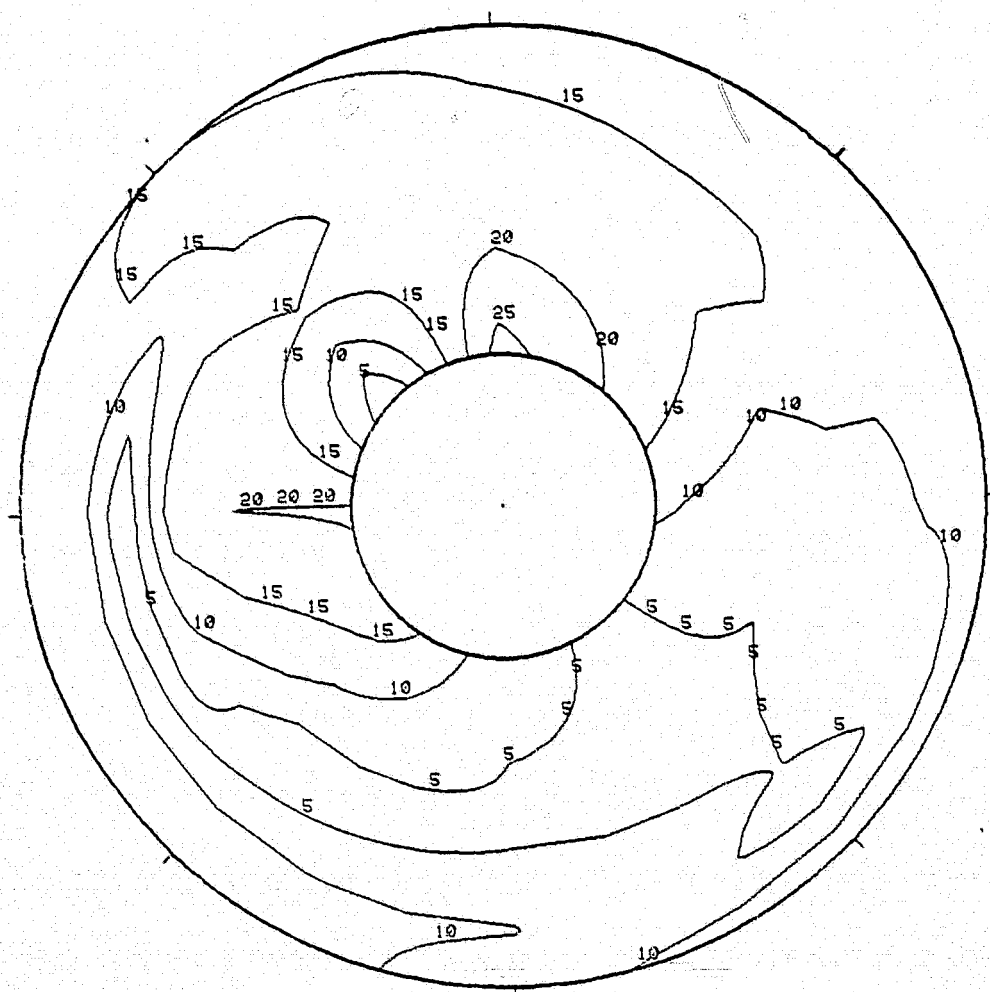
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OF FOUR QUARTERS

FSCP - NASA DATA STUDY

DATA PART/POINT 353/15 IDENT. 48
THE SEGMENT START TIME WAS AT 0:42: 2.170

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 18.7	BYPASS 0.0	WAT2 75.1%	CIVV -25.0
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48(n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01126

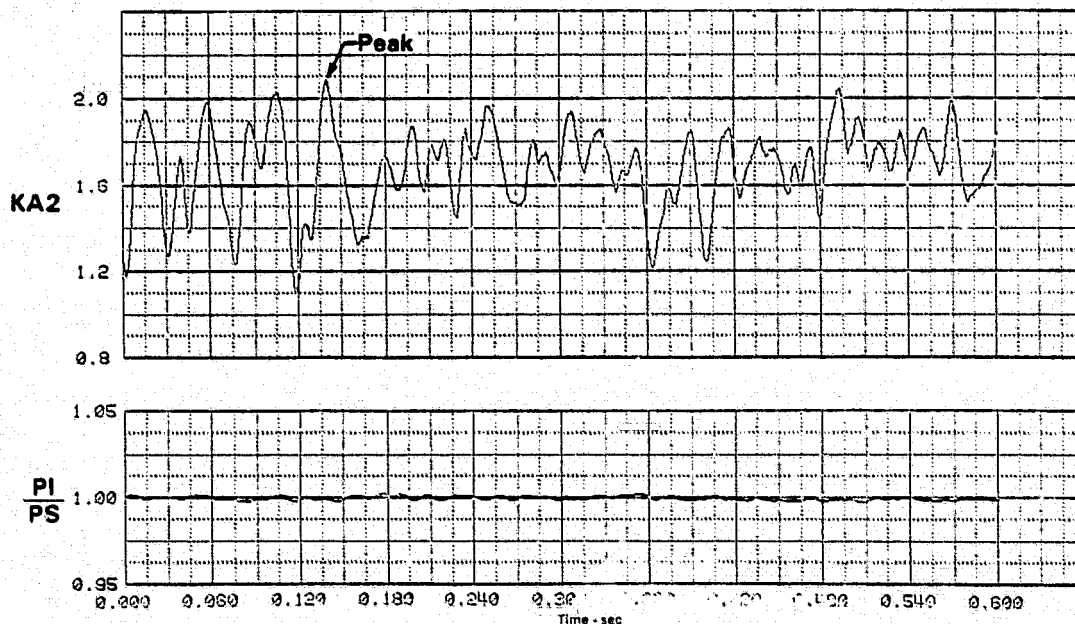
FIGURE G-48 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 75.1 %

FSCP - NASA DATA STUDY

DATA PART/POINT 353 /15 IDENT. 48
THE SEGMENT START TIME WAS AT 0:42: 2.001

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 18.7	BYPASS 0.0	WAT2 75.1%	Q1VV -25.0
PI 44.14 (8.402)	PI/PS 0.998	KTHETA 9.235	KPA2 0.211	BKPA2 1.374	K12 2.333	K13 0.232	K14 0.226
							D2 0.076

48(o) Time History Plots 45 Hz



PEAK AT TIME = 0.139578 SECONDS

FIGURE G-48 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 75.1%

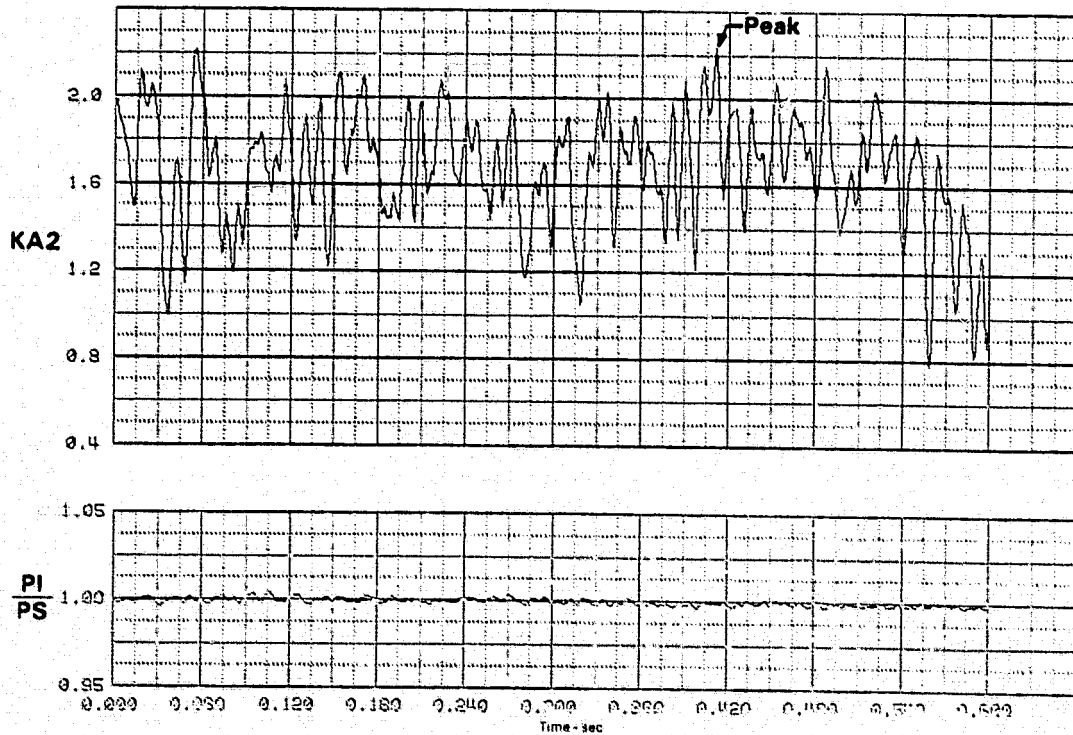
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FSCP - NASA DATA STUDY

DATA PART/POINT 353 /15 IDENT, 48
THE SEGMENT START TIME WAS AT 0:42: 2.170

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA2 18.7	BYPASS 0.0	WAT2 75.1%	CIVV -25.0
P1 44.15 (6.404)	P1/PS 0.993	KTHETA 0.260	KPA2 0.233	EKPA2 1.075	K22 2.275	K23 0.943	K25P 0.371
							D2 0.091

48(p) Time History Plots 100 Hz



PEAK AT TIME = 0.411160 SECONDS

FIGURE G-48 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 75.1%

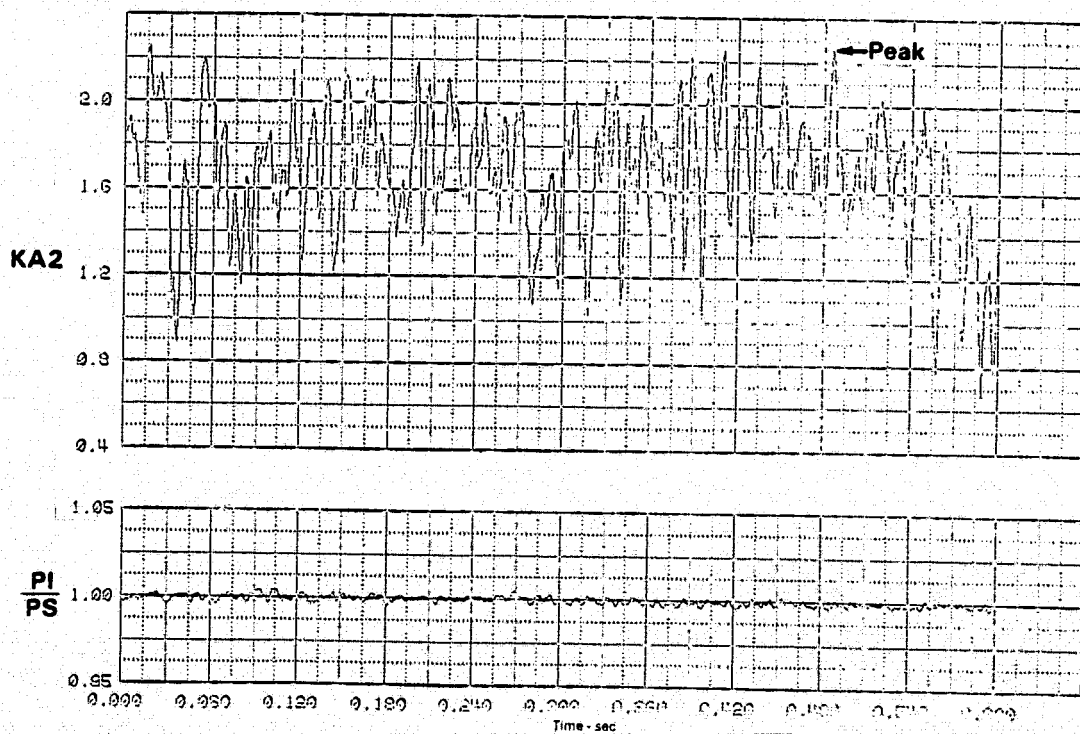
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FSCP - NASA DATA STUDY

DATA PART/POINT 353 /15 IDENT. 48
THE SEGMENT START TIME WAS AT 0:42: 2.172

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 13.7	BYPASS 0.0	WAT2 75.1%	CIVV -25.0
44.02 (6.385)	PI/PS 3.997	KTHETA 0.260	KRA2 0.225	BKRA2 1.395	KA2 2.255	KC3 0.333	KCSP 0.274
							D2 0.023

48 (q) Time History Plots 170 Hz



PEAK AT TIME = 0.485818 SECONDS

FIGURE G-48 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 75.1%

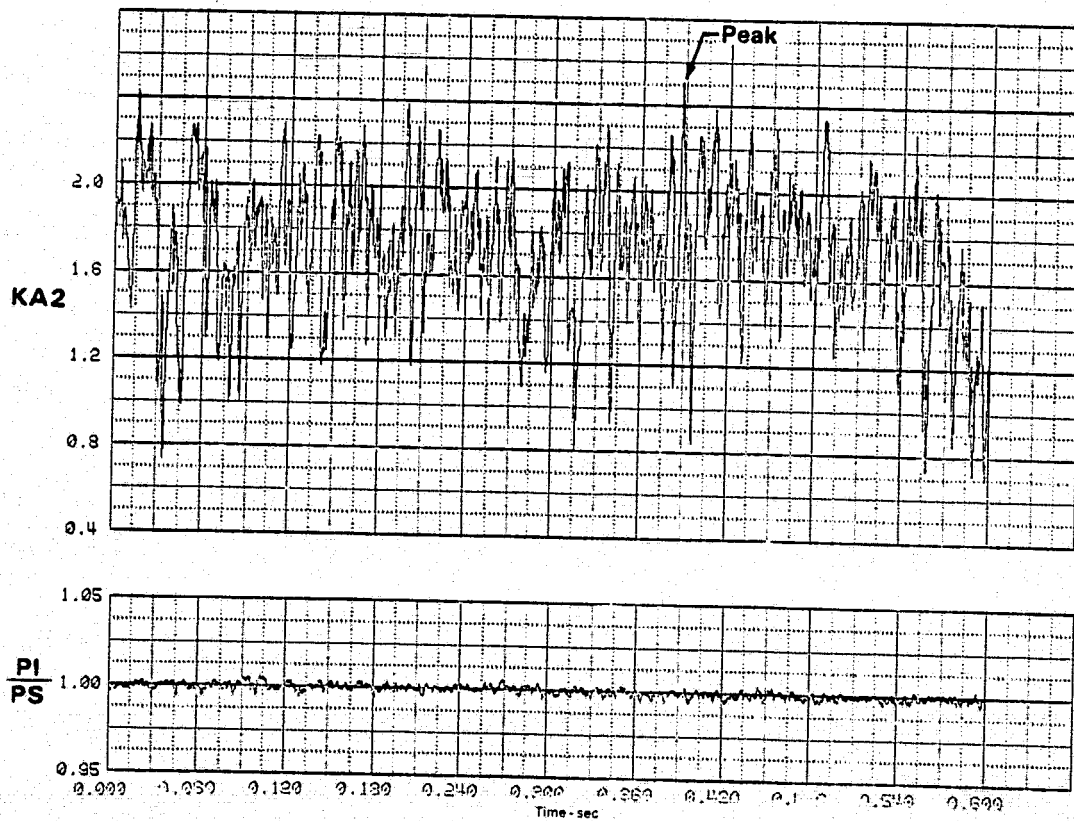
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FSCP - NASA DATA STUDY

DATA PART/POINT 353 /15 IDENT. 48
THE SEGMENT START TIME WAS AT 0:42: 2.170

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 13.7	BYPASS 0.0	WAT2 75.1%	CIVV -25.0
P1 44.17 (8.407)	P1/PS 1.000	KTHETA 0.255	KRA2 0.254	BKRA2 2.255	KR2 2.510	KC2 0.402	KOSP 0.266
							D2 0.098

48(r) Time History Plots 500 Hz



PEAK AT TIME = 0.387530 SECONDS

FIGURE G-48 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 75.1\%$

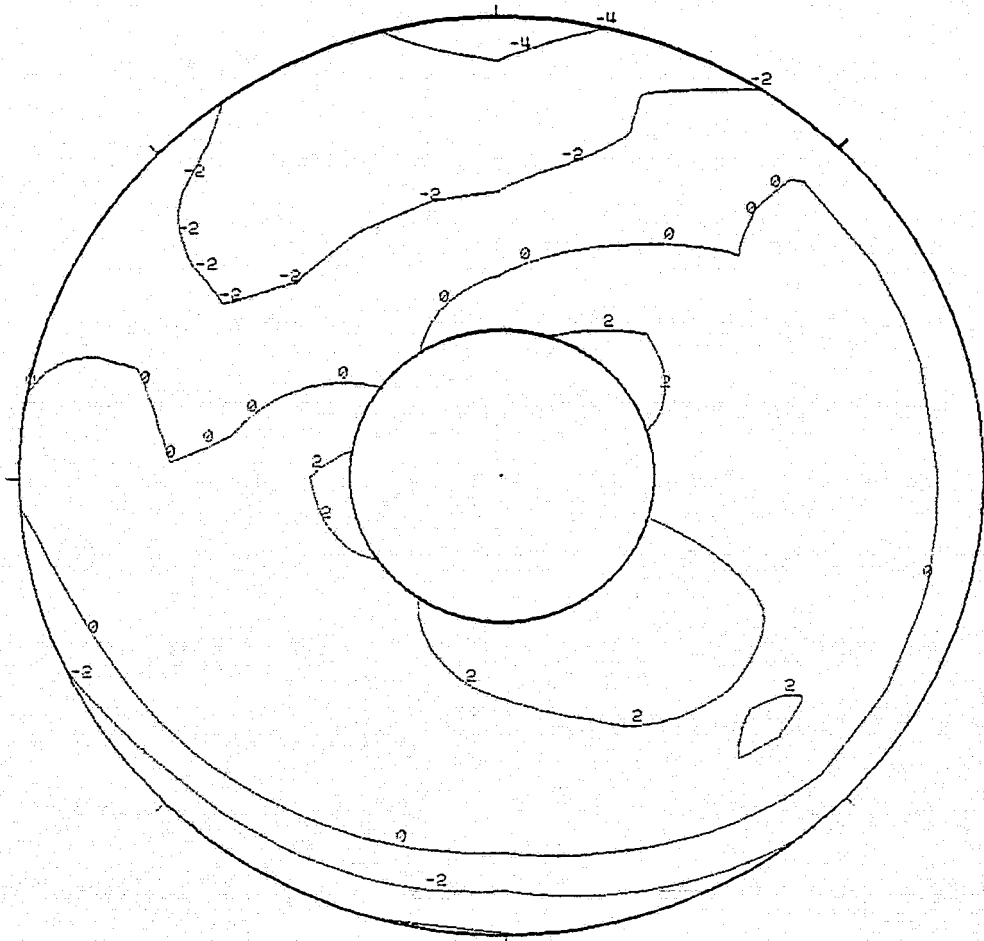
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FSCP - NASA DATA STUDY

DATA PART/POINT 353 /15 IDENT. 48
THE SEGMENT START TIME WAS AT 0:42: 2.091

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 18.7	BYPASS 0.0	WAT2 75.1%	CIVV -25.0
P1 44.14 (6.402)	P1/PS 0.939	KTHETA 0.209	KRA2 0.211	BKRA2 1.374	KA2 2.053	KC2 0.232	KOSP 0.226
							D2 0.076

**48(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz**



MEAN FACE PRESSURE = 44.14 kPa (6.402 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.139578 SECONDS

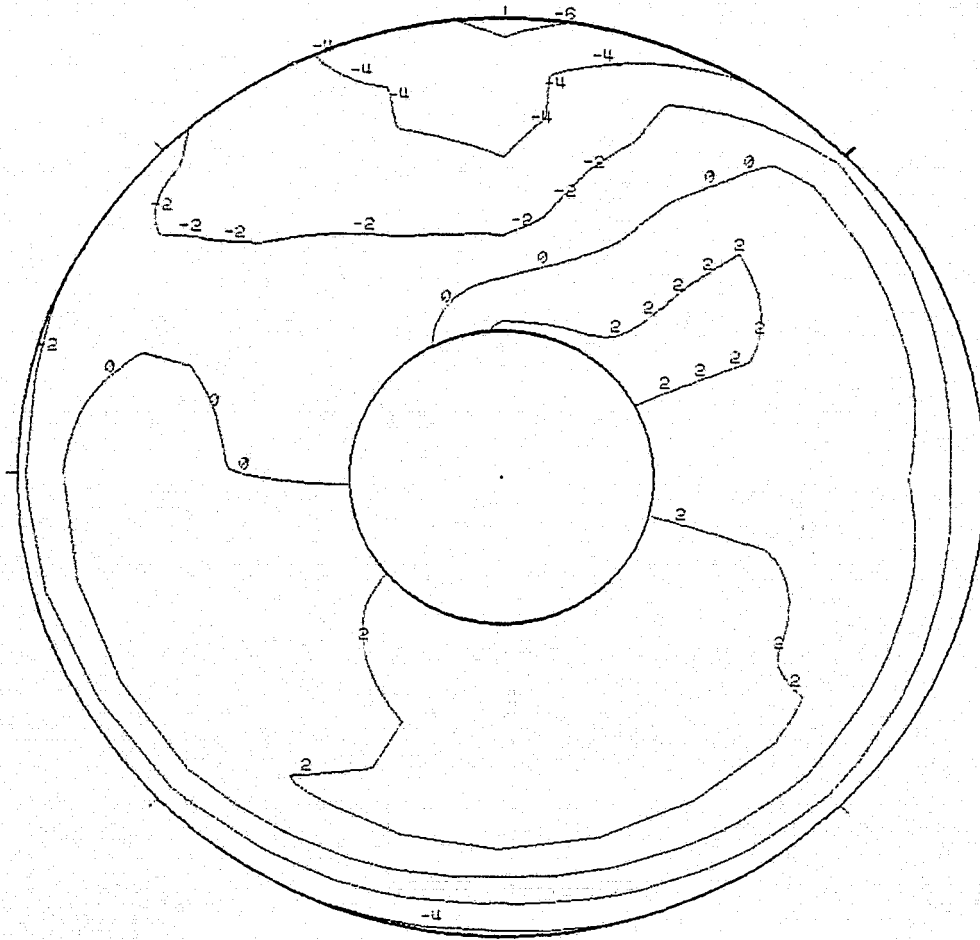
FIGURE G-48 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 75.1 %

FSCP - NASA DATA STUDY

DATA PART/POINT 353 /15 IDENT. 48
THE SEGMENT START TIME WAS AT 0:42: 2.170

MACH 1.3	ALPHA -2	BETA 0	PHO -3.0	DELTA3 19.7	BYPASS 0.0	WAT2 75.1%	CIVV -25.0
P1 44.15 (6.404)	PI/PS 0.939	KTHETA 0.280	KPA2 0.222	BKPA2 1.375	KP2 2.235	KC2 0.349	KOSP 0.271
							D2 0.091

**48(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz**



MEAN FACE PRESSURE = 44.15 kPa (6.404 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.411160 SECONDS

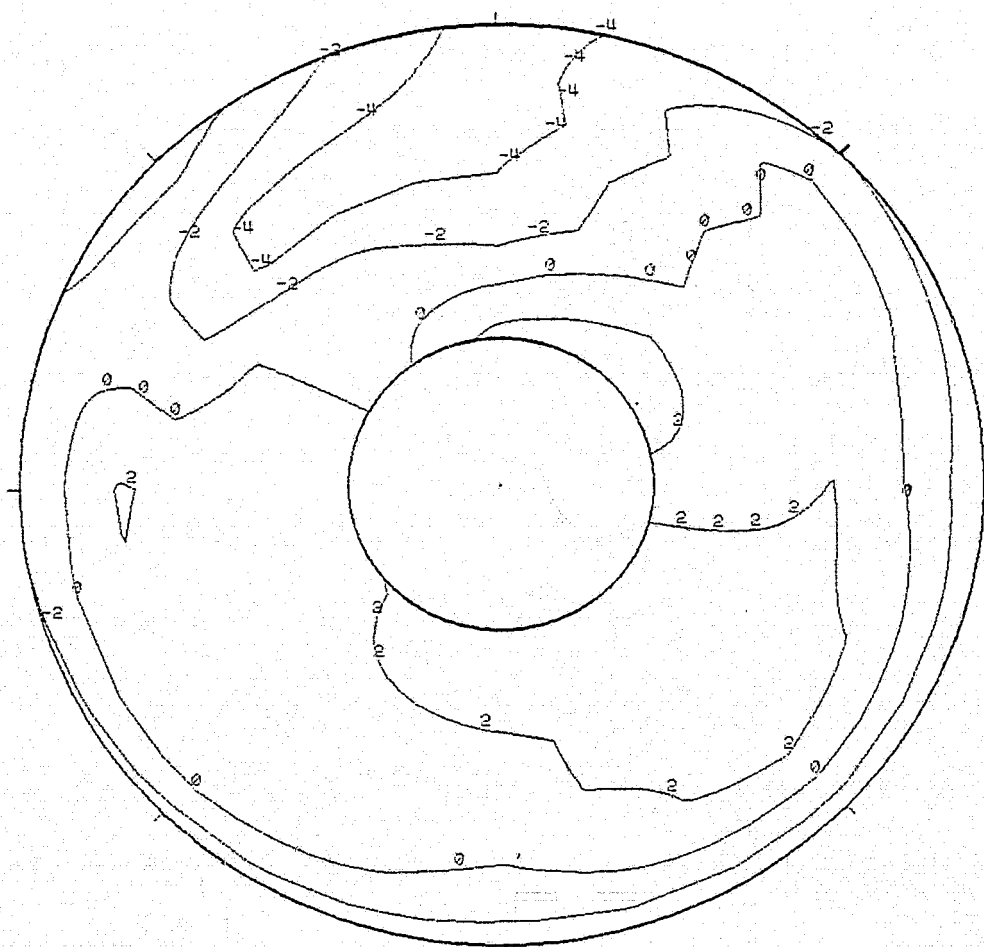
FIGURE G-48 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 75.1\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 /15 IDENT. **48**
THE SEGMENT START TIME WAS AT 0:42: 2.172

MACH 1.8	ALPHA -2	BETA 0	PHO -3.9	DELTA3 19.7	BYPASS 0.0	WAT2 75.1%	CIVV -25.0
P1 44.02 (6.385)	PI/P3 0.997	KTHETA 0.260	KPA2 0.235	BKRA2 1.395	KQ2 2.255	KC2 0.392	KOSP 0.274
							D2 0.033

48(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 170 Hz



MEAN FACE PRESSURE = 44.02 kPa (6.385 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.485818 SECONDS

FIGURE G-48 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 75.1 %

FSCP - NASA DATA STUDY

DATA PART/POINT 353 /15 IDENT. 48
THE SEGMENT START TIME WAS AT 0:42: 2.170

MACH
1.8

ALPHA
-2

BETA
0

RHO
-3.0

DELTA3
18.7

BYPASS
0.0

WAT2
75.1%

CIVV
-25.0

P1
44.17 (6.407)

PI/PS
1.000

KTHETA
0.255

KRA2
0.254

BKRA2
2.255

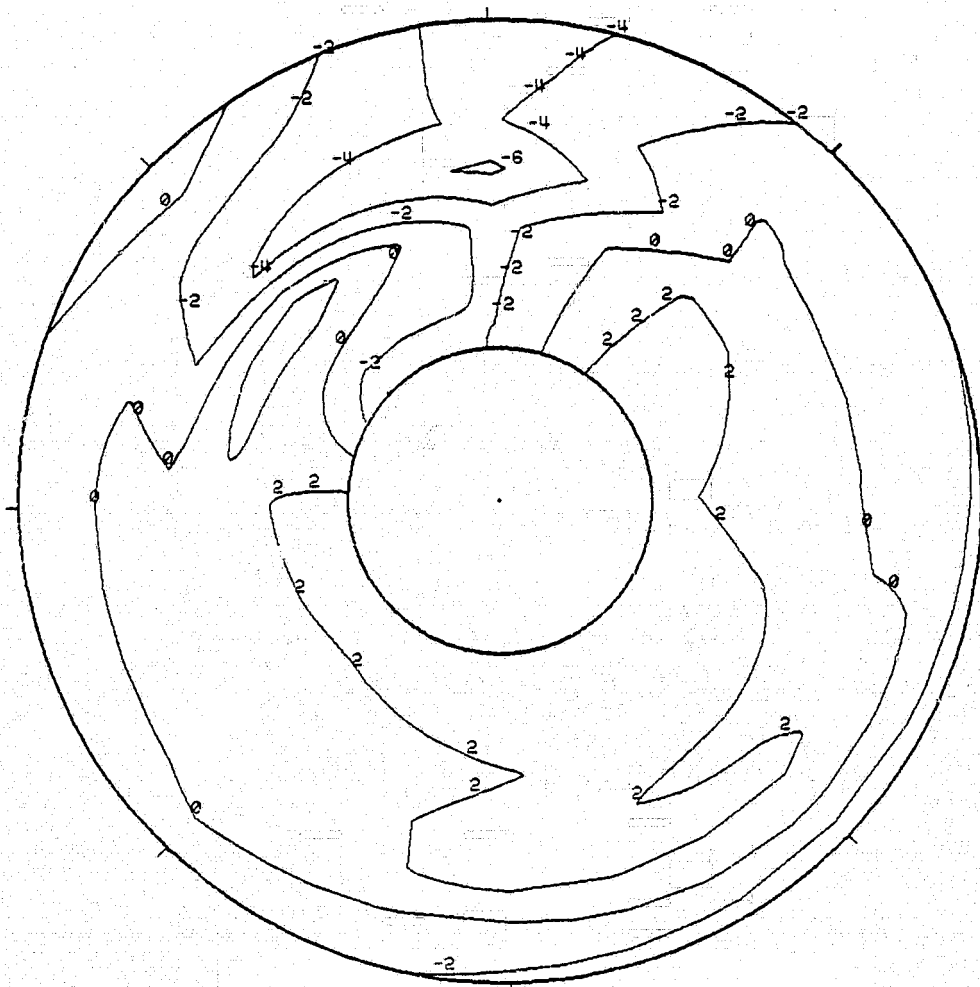
KRA2
2.510

KC2
0.402

KOSP
0.266

D2
0.098

48(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz



MEAN FACE PRESSURE = 44.17 kPa (6.407 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.387530 SECONDS

FIGURE G-48 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 75.1\%$

FSCP - NASA Data Study
 Part/Point - 353/5, Ident 49
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -25.00

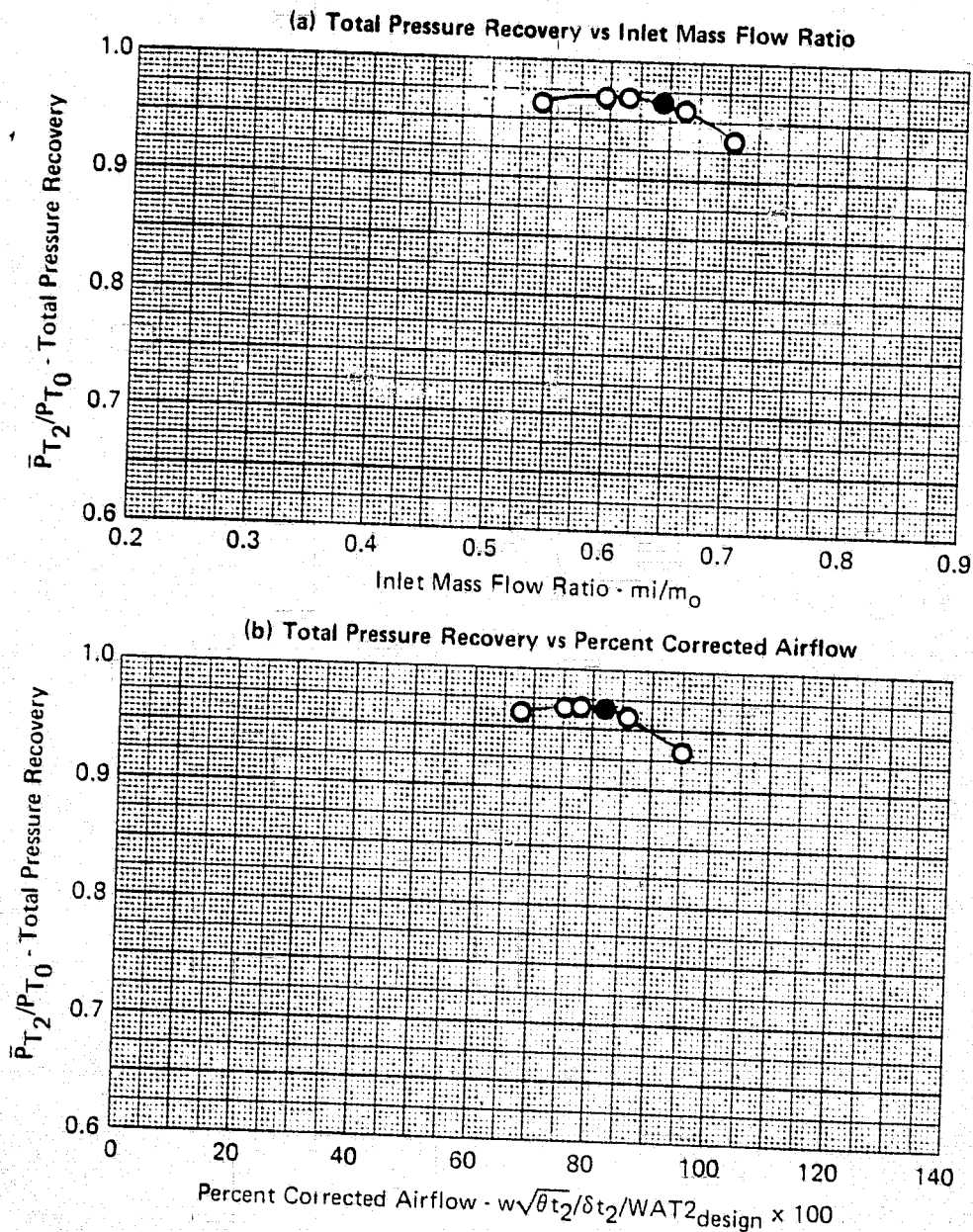
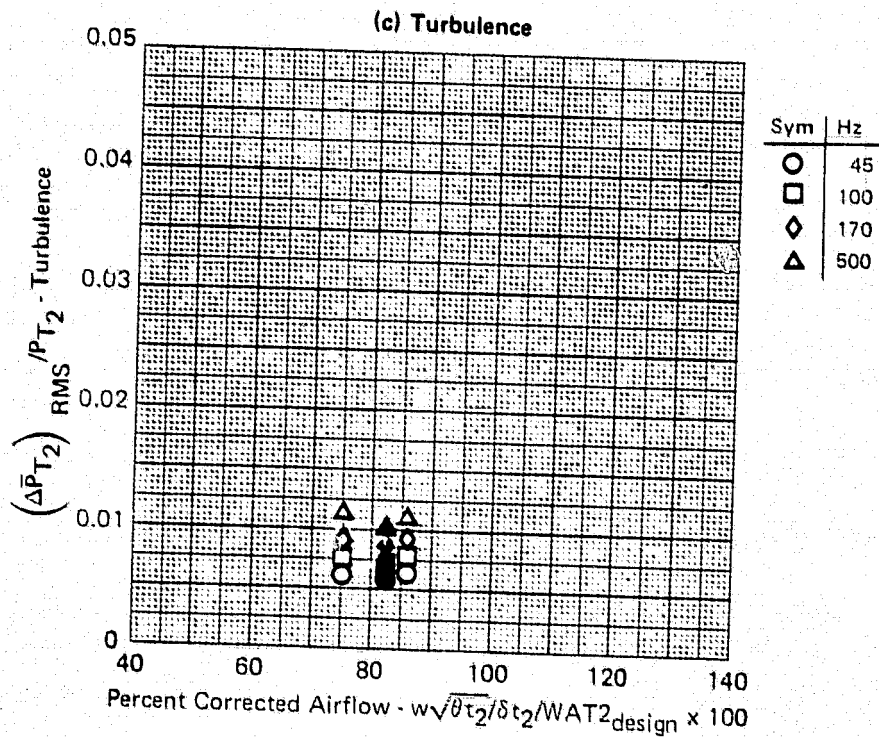


FIGURE G-49
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

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FSCP - NASA Data Study
 Part/Point - 353/5, Ident 49
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -25.00



GP77-0658-5

FIGURE G-49 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

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FSCP - NASA Data Study
 Part/Point - 353/5, Ident 49
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -25.00

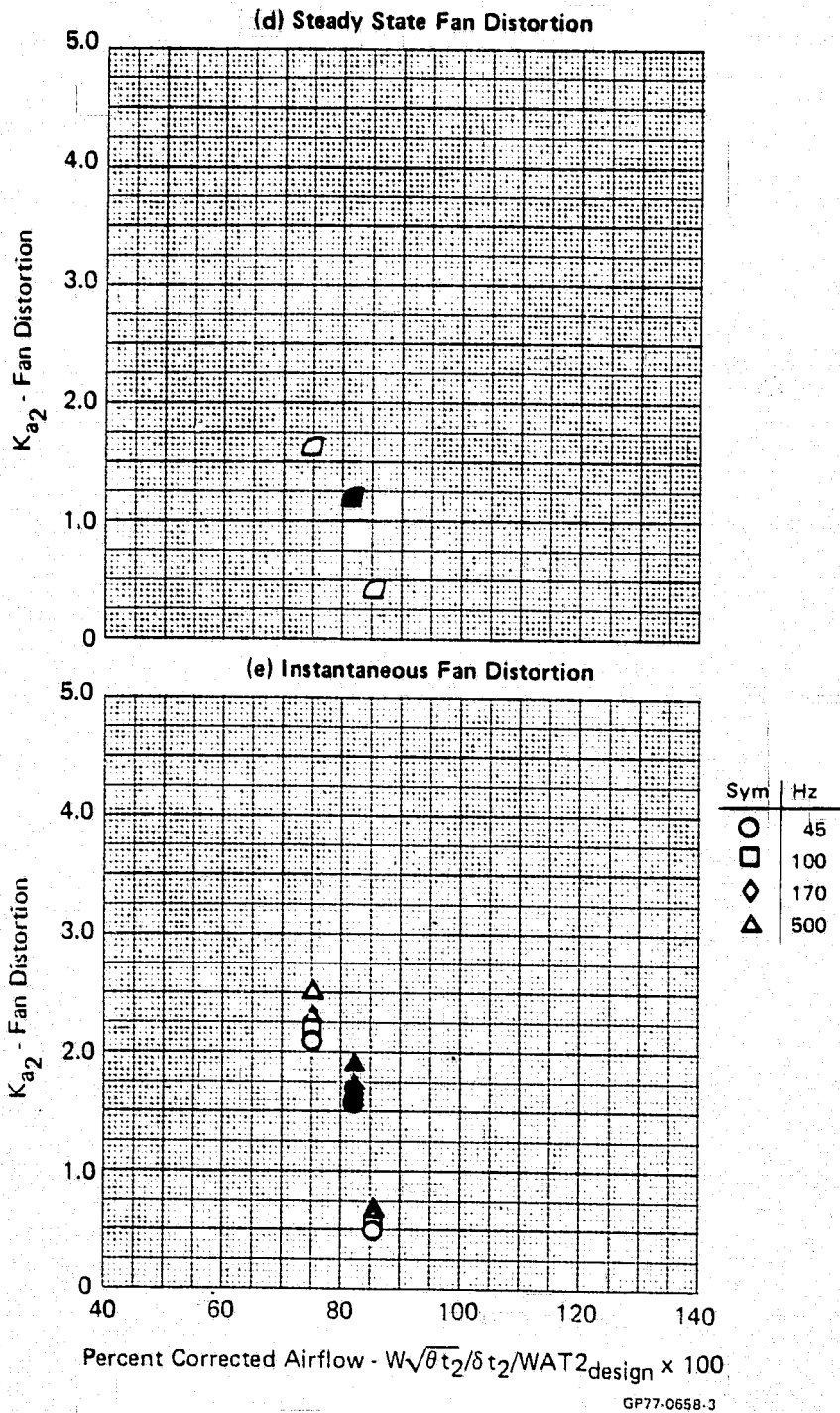
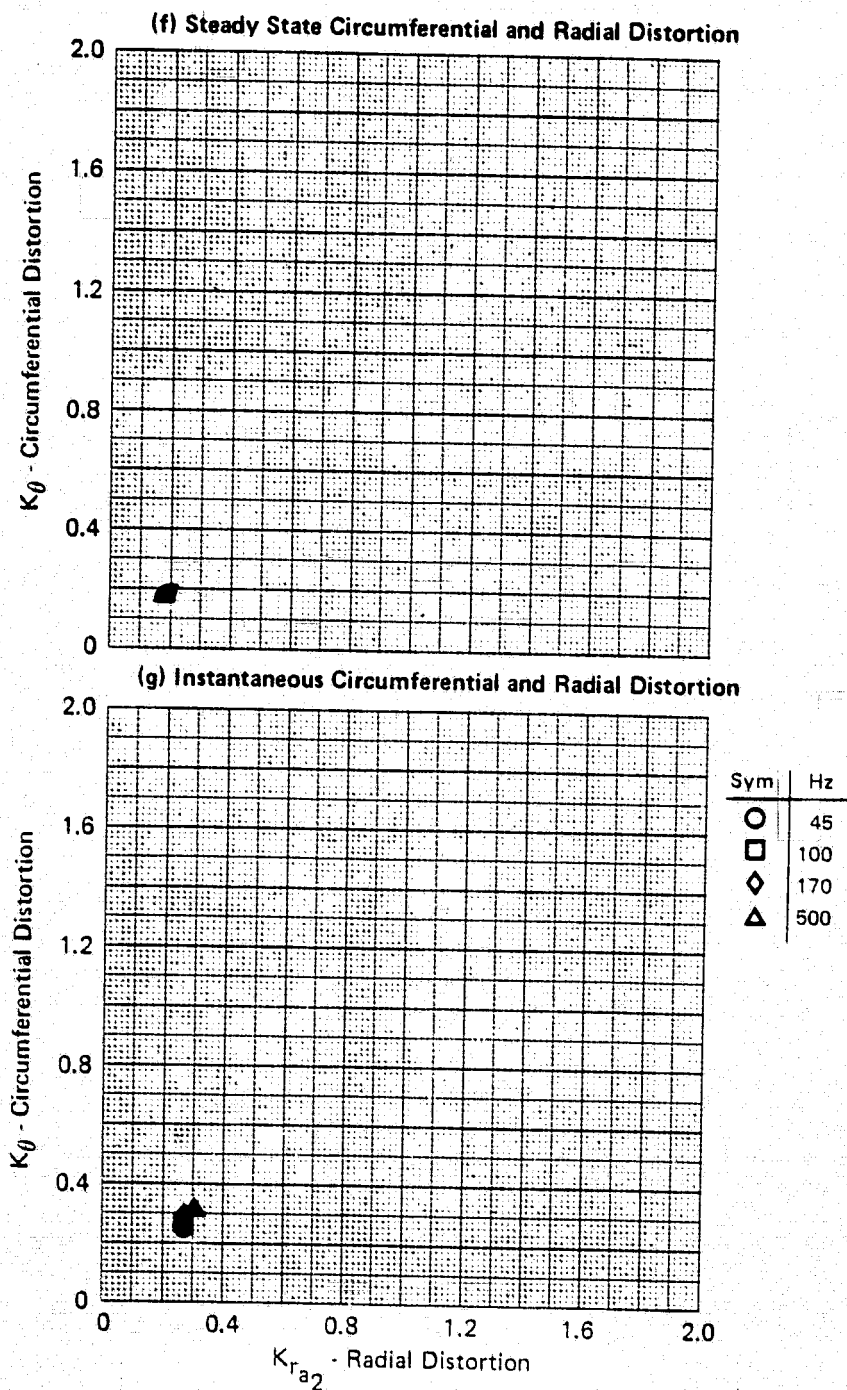


FIGURE G-49 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

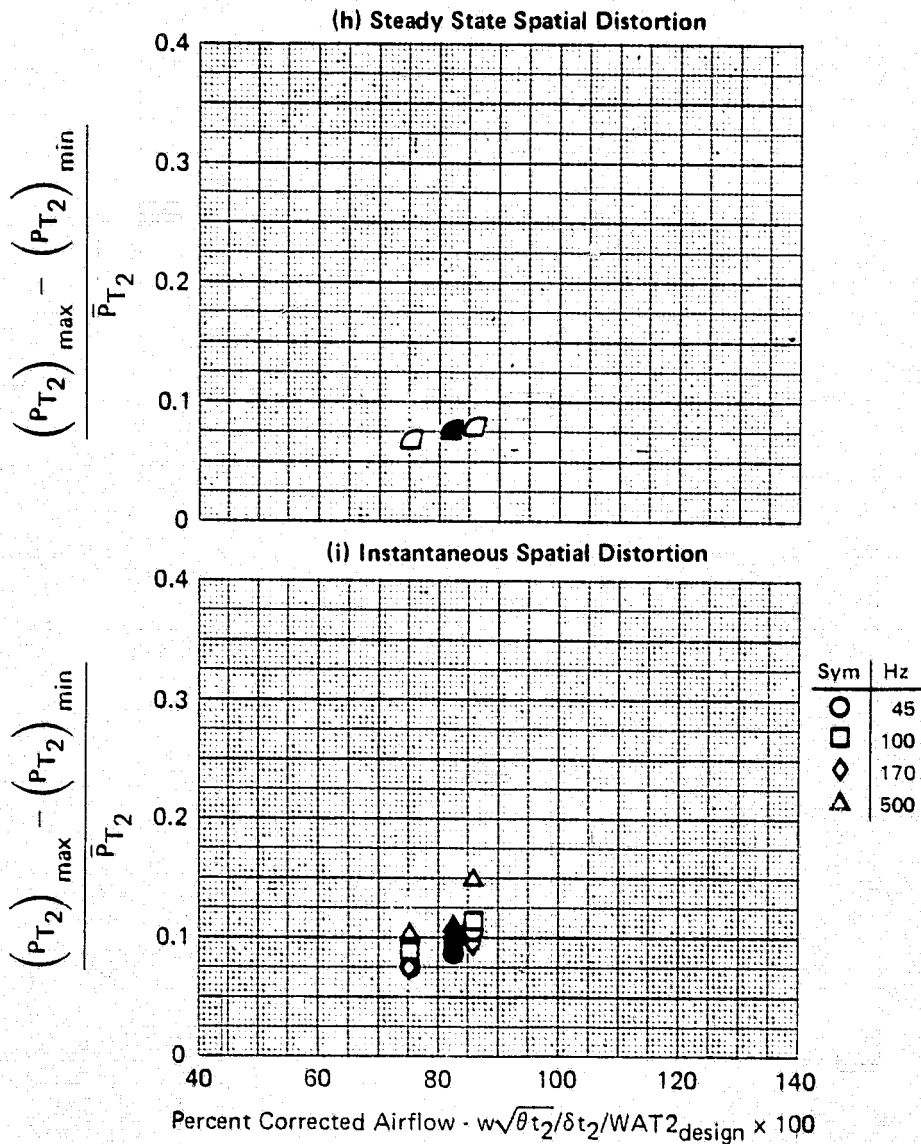
FSCP - NASA Data Study
 Part/Point - 353/5, Ident 49
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -25.00



GP77-0658 2

FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

FSCP - NASA Data Study
 Part/Point - 353/5, Ident 49
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -25.00



GP77-0658-4

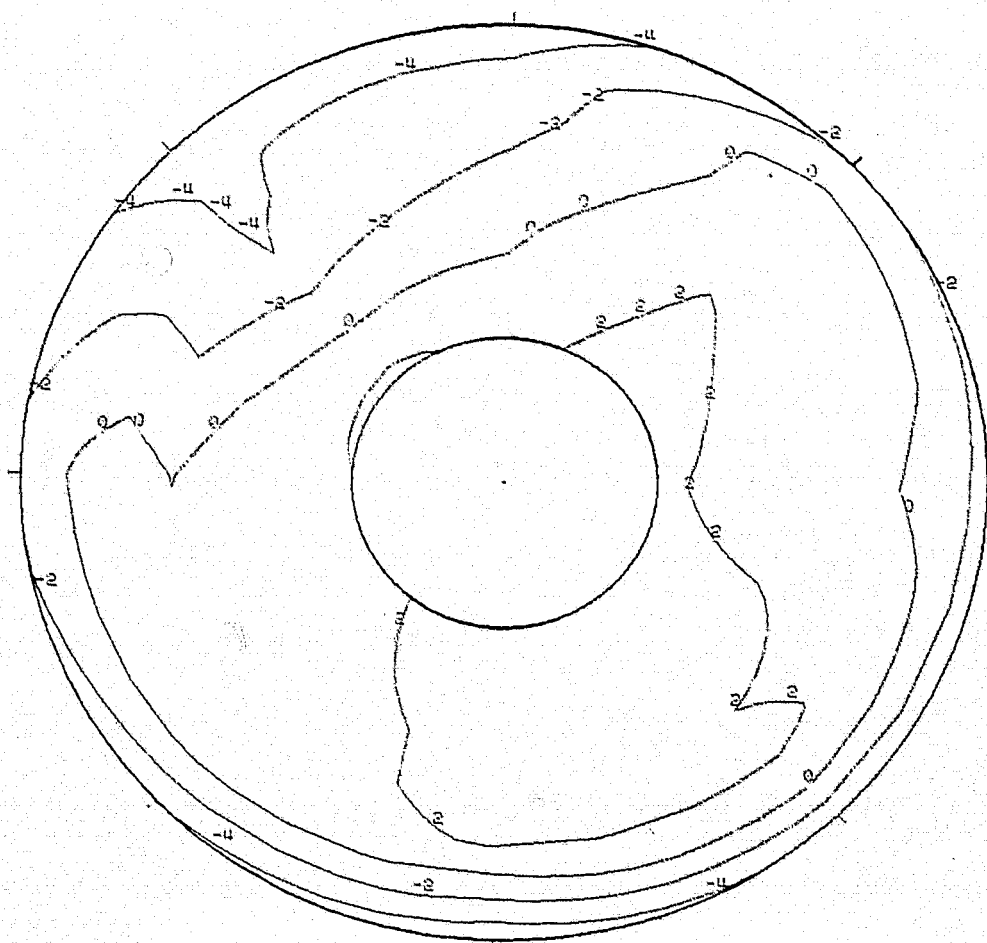
FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 / 5 IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.039

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 13.7	BYPASS 0.0	WAT2 82.2%	CIVV -25.0
PI 44.13 (6.401)	P1/P3 1.990	KTHETA 0.176	KPA2 0.194	BKPA2 1.010	KP2 1.186	KC2 0.131	KESP 0.174
							D2 0.078

49 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 44.13 kPa (6.401 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

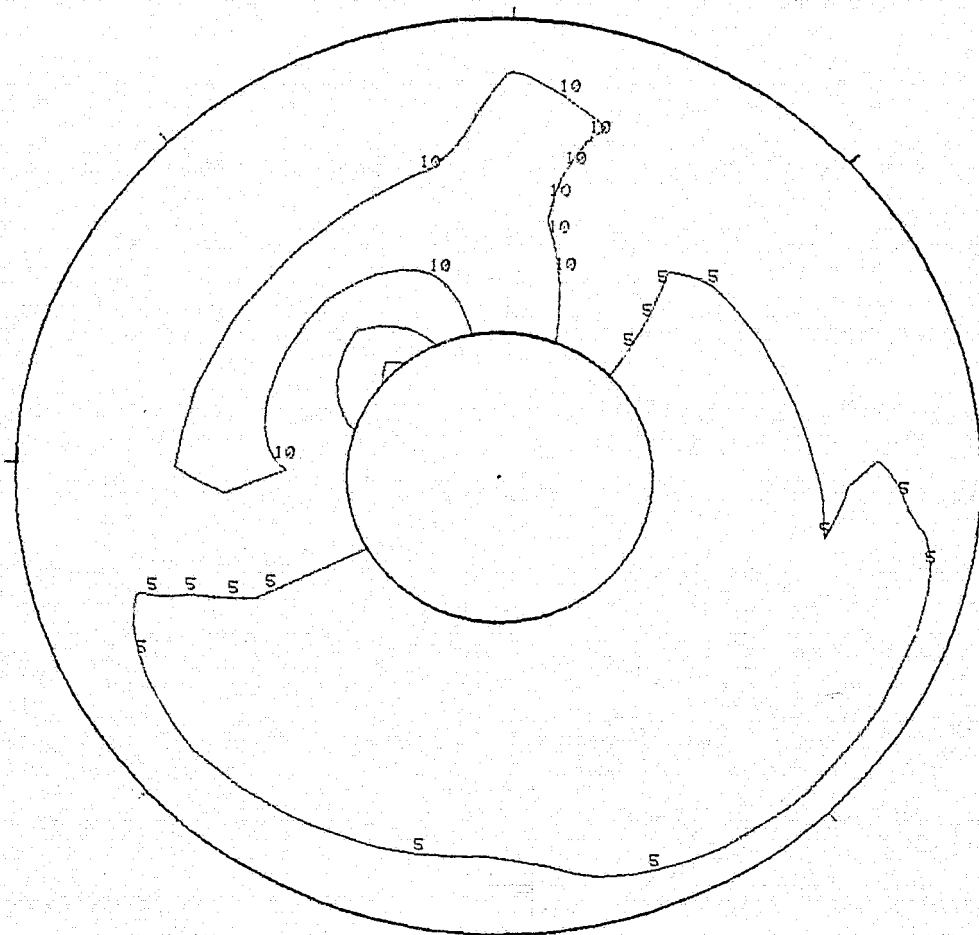
FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 / 5 IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.089

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 18.7	BYPASS 0.0	WAT2 82.2%	CIVV -25.0
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49(k) Turbulence Contour 45 Hz



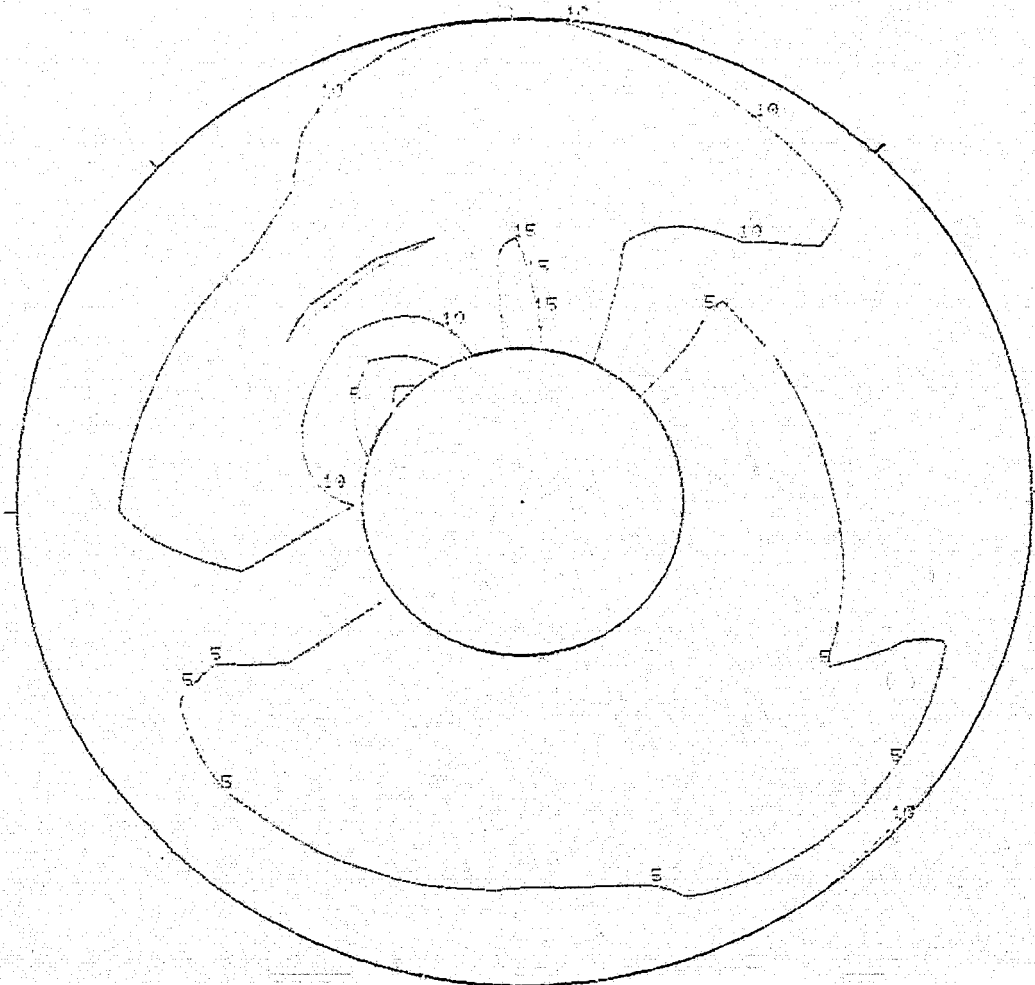
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00598
FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 / 5 IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.090

MACH	ALPHA	BETA	PHI	DELTA	BYPASS	WAT2	Q1VW
1.3	-2	0	-5.0	10.7	0.0	82.2%	-25.9

49 (I) Turbulence Contour 100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00745

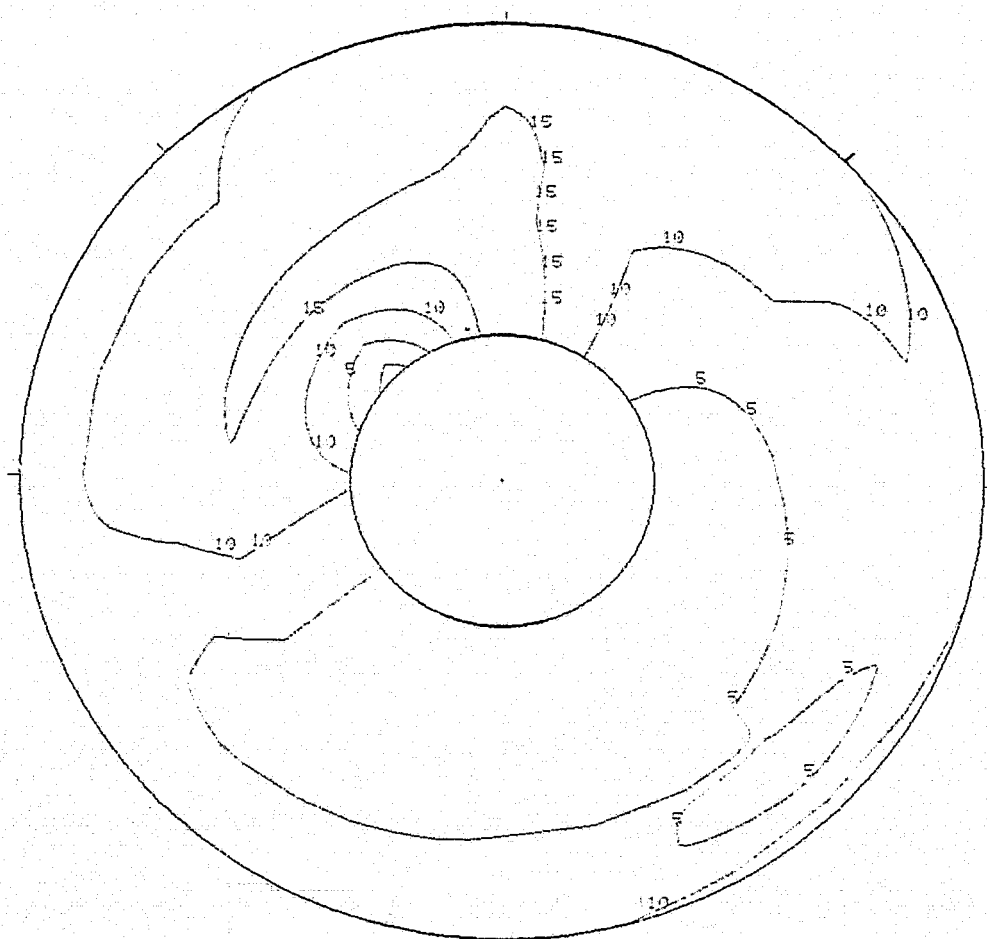
FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 / E IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.091

MACH 1.8	ALPHA -2	BETA 0	PHI -3.0	DELTA3 13.7	BYPASS 0.0	WAT2 82.2%	CIVV -25.0
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49(m) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00857

FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 82.2 %

FSCP - NASA DATA STUDY

DATA PART/POINT 353 / 5 IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.090

MACH
1.8

ALPHA
-2

BETA
0

RHO
-2.0

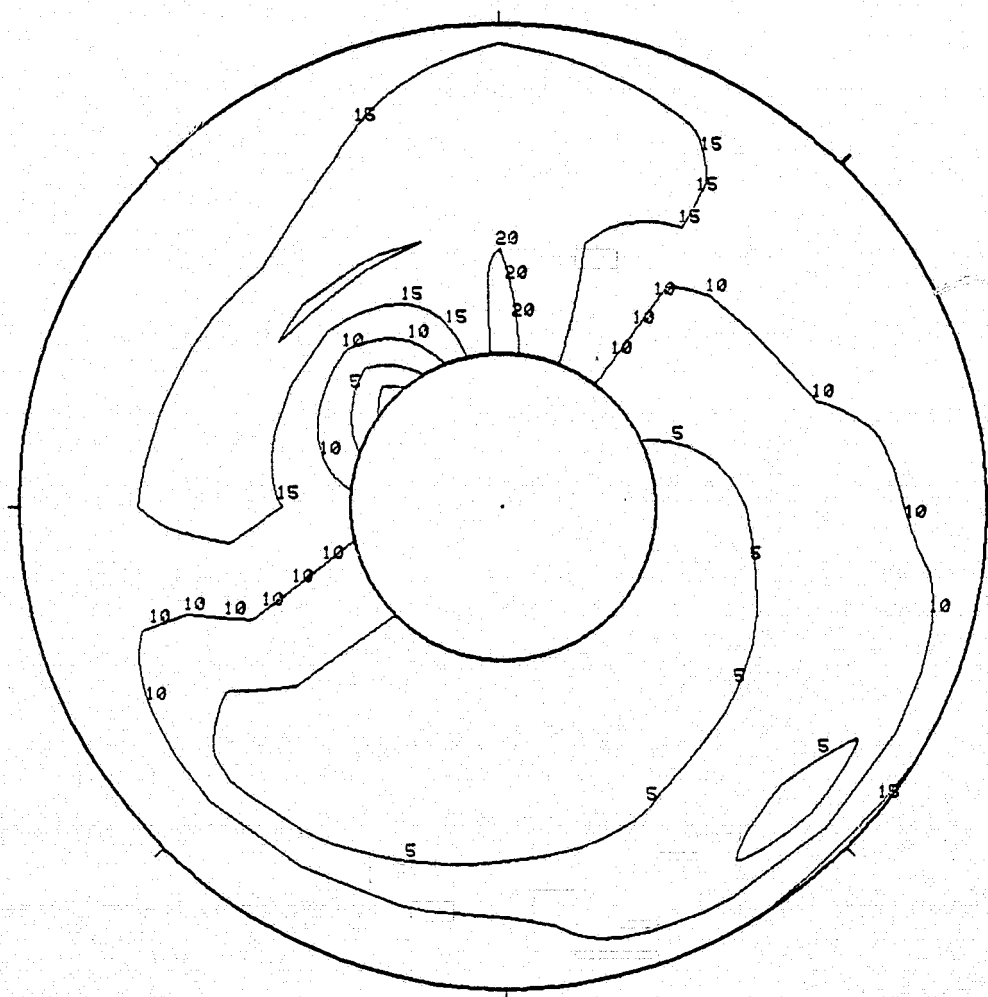
DELTA3
13.7

BYPASS
0.0

WAT2
82.2%

CIVV
-25.0

49(n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01045

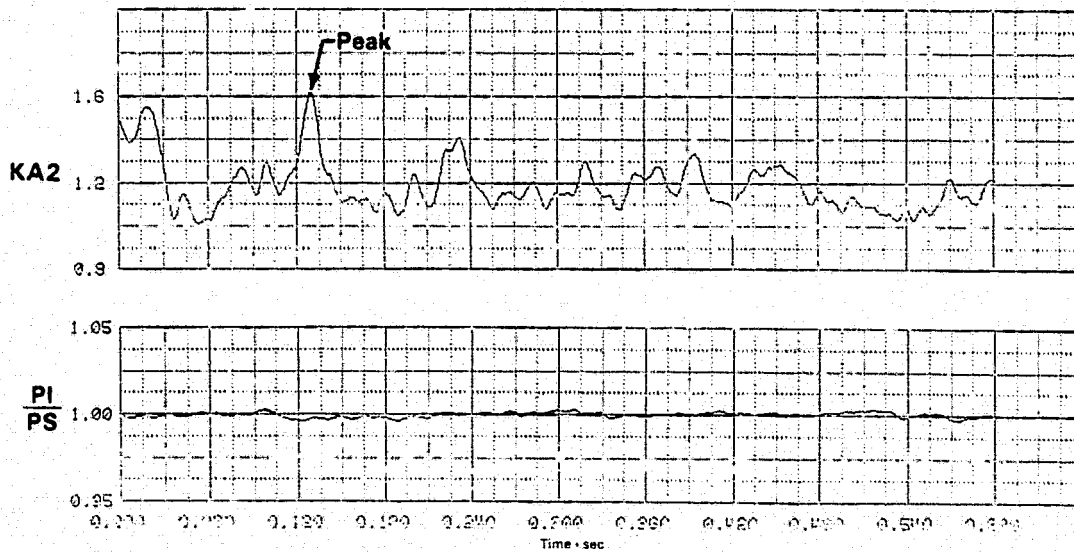
FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 82.2 %

FSCP - NASA DATA STUDY

DATA PART/POINT 353 / 5 IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.069

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 18.7	BYPASS 0.0	WAT2 82.2%	CIVV -25.0
PI 44.04 (6.388)	PI/PS 0.993	KTHETA 0.255	KPAS 0.251	SKPAS 1.361	K02 1.516	K03 0.344	K05P 0.298
							D2 0.037

49(o) Time History Plots 45 Hz



PEAK AT TIME = 0.129840 SECONDS

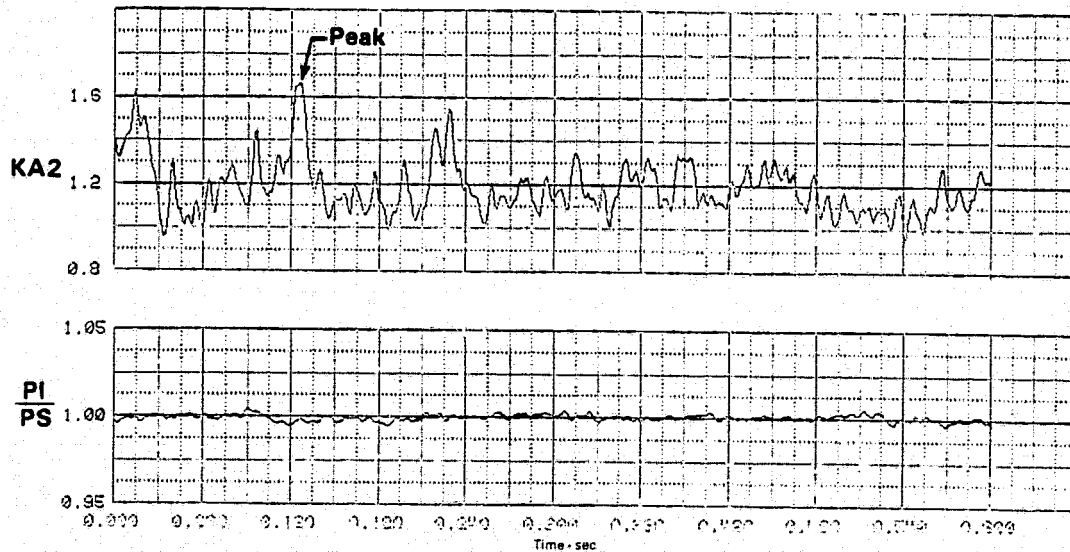
FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 82.2%

FSCP - NASA DATA STUDY

DATA PART/POINT 353 / 5 IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.000

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 18.7	BYPASS 0.0	WAT2 82.2%	CIVV -25.0
PI 44.08 (6.393)	PI/PS 0.999	KTHETA 0.261	KAA2 0.253	EKPA2 1.431	KA2 1.662	KCS 0.385	KOSP 0.319
							O2 0.090

49(p) Time History Plots 100 Hz



PEAK AT TIME = 0.126594 SECONDS

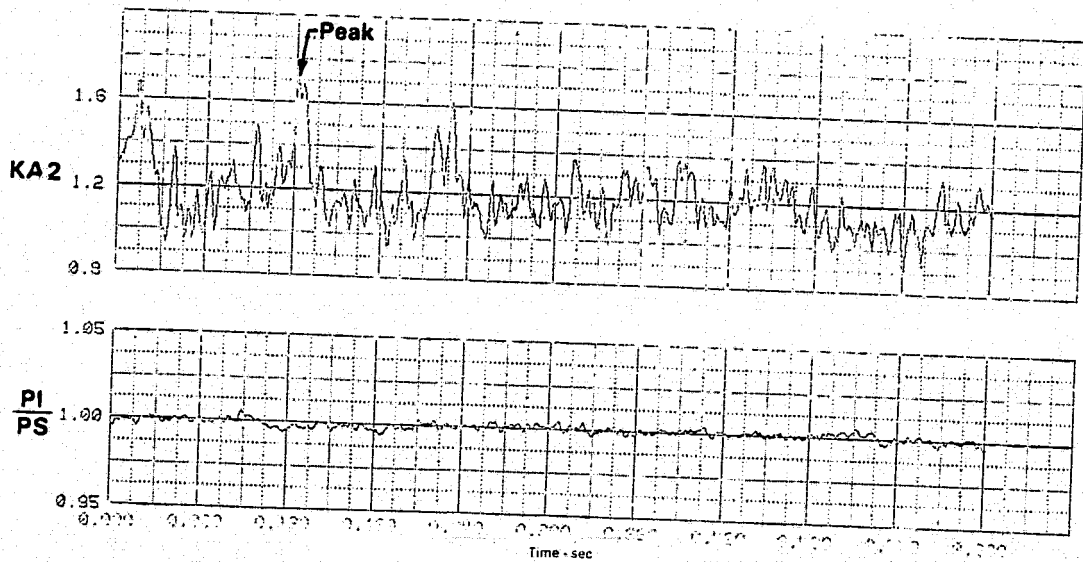
FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 / 5 IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.001

MACH 1.8	ALPHA -2	BETA 0	PHI -3.0	DELTA2 18.7	BYPASS 0.0	WAT2 82.2%	CIVV -25.0
PI 43.96(0.376)	PI/P3 0.930	KTHETA -1.236	KPA2 0.271	BKPA2 1.412	KQ2 1.632	KQ2 0.345	KQSP 0.341
							D2 0.106

49(q) Time History Plots 170 Hz



PEAK AT TIME = 0.121184 SECONDS

FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8, \alpha = -2.0, \beta = 0.0, WAT2 = 82.2\%$

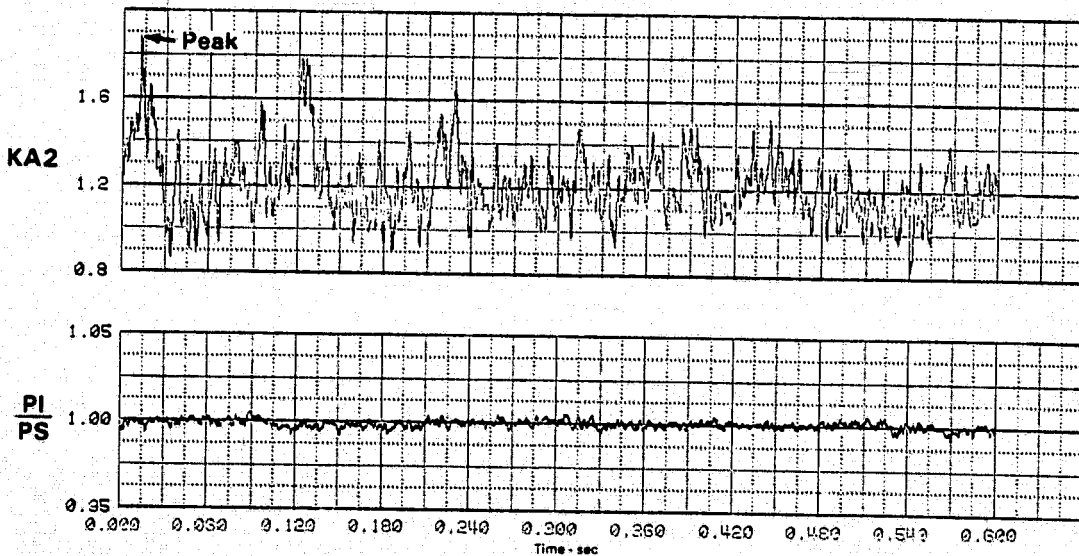
C-7

FSCP - NASA DATA STUDY

DATA PART/POINT 353 / 5 IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.090

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 18.7	BYPASS 0.0	WAT2 82.2%	CIVV -25.0
PI 44.13 (6.400)	PI/PS 1.000	KTHETA 0.323	KRA2 0.299	BKRA2 1.558	KA2 1.831	KC2 0.503	KOSP 0.410
							D2 0.107

49(r) Time History Plots 500 Hz



PEAK AT TIME = 0.012195 SECONDS

FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8, \alpha = -2.0, \beta = 0.0, WAT2 = 82.2\%$

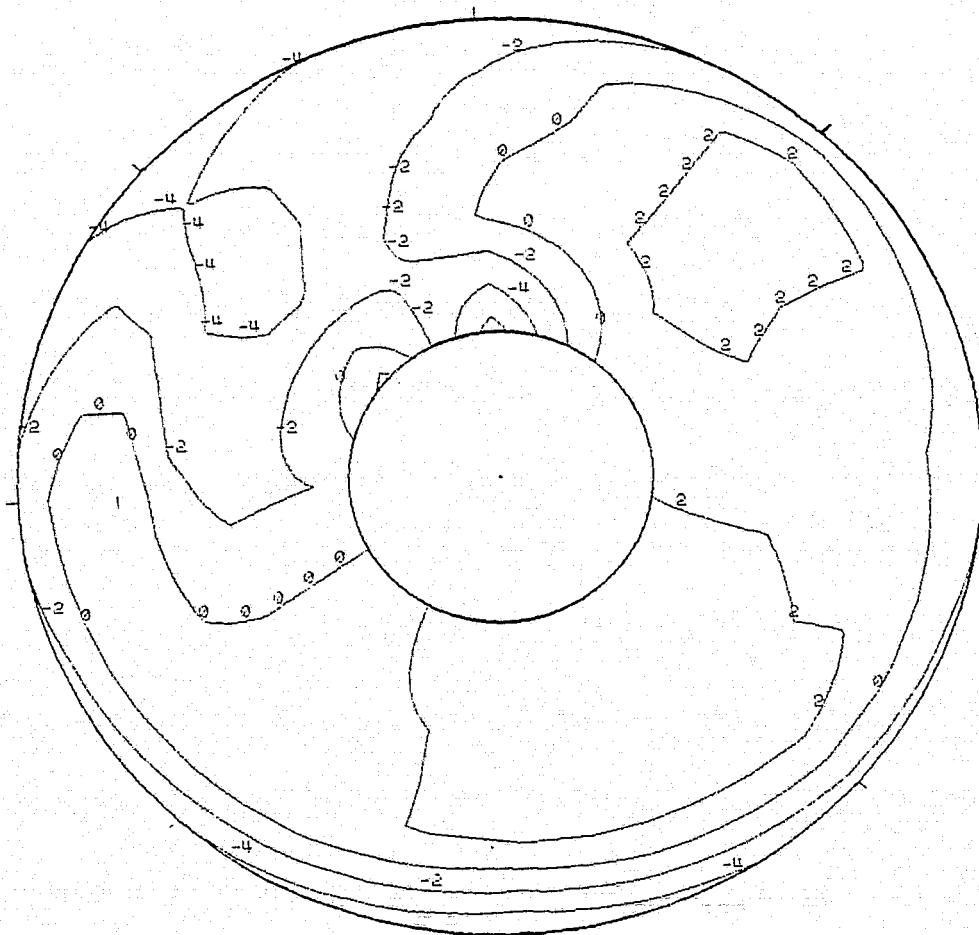
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FSCP - NASA DATA STUDY

DATA PART/POINT 353 / 5 IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.089

MACH 1.8	ALPHA -2	BETA 0	RHO -3.3	DELTA3 18.7	BYPASS 0.0	WAT2 82.2%	CIVV -25.0
PI 44.04 (6.388)	PI/P3 0.993	KTHETA 0.255	KPA2 0.261	BKPA2 1.361	KQ2 1.616	KC2 0.344	KOSP 0.306
							D2 0.087

**49(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz**



MEAN FACE PRESSURE = 44.04 kPa (6.388 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.129840 SECONDS

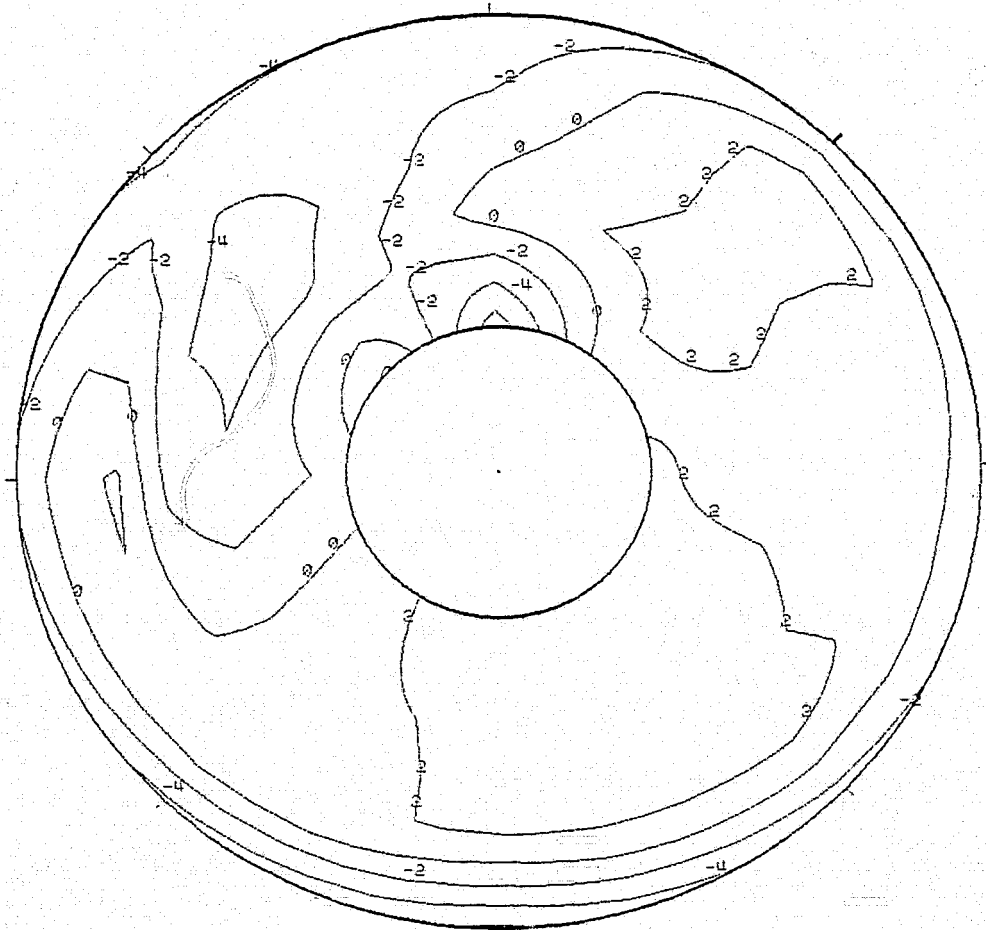
FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 / 5 IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.090

MACH 1.8	ALPHA -2	BETA 0	PHO -3.0	DELTA3 18.7	BYPASS 0.0	WAT2 82.2%	CIVV -25.0
P1 44.08 (6.393)	P1/PS 0.999	KTHETA 0.261	KRA2 0.269	BKRA2 1.401	KA2 1.562	KC2 0.365	KQSP 0.319
							D2 0.090

49(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 100 Hz



MEAN FACE PRESSURE = 44.08 kPa (6.393 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.126594 SECONDS

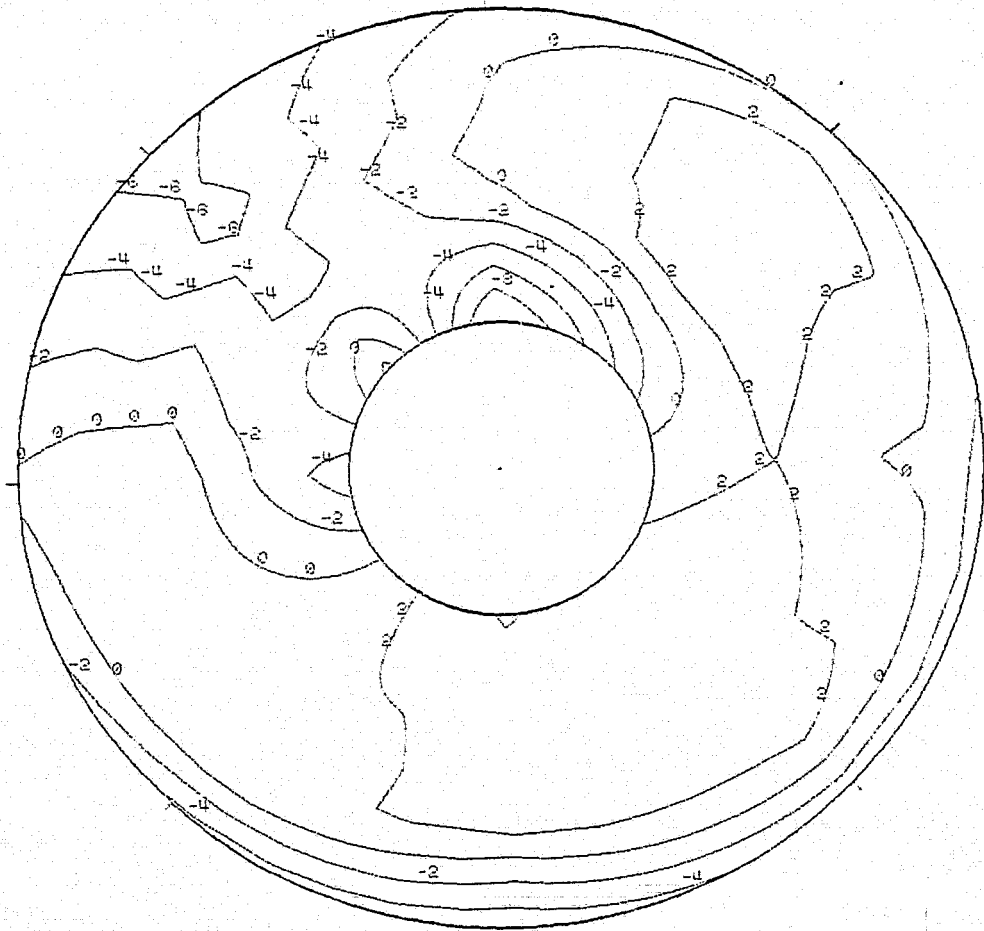
FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 / 5 IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.091

MACH 1.3	ALPHA -2	BETA 0	P40 -3.9	DELTA3 18.7	BYPASS 0.0	WAT2 82.2%	CIVV -25.9
P1 43.96(6.376)	PI/P3 0.990	KTHETA 0.236	KPA2 0.271	BKPA2 1.412	KP2 1.239	KC2 0.245	KOSP 0.241
							D2 0.106

49(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 170 Hz



MEAN FACE PRESSURE = 43.96 kPa (6.376 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.121184 SECONDS

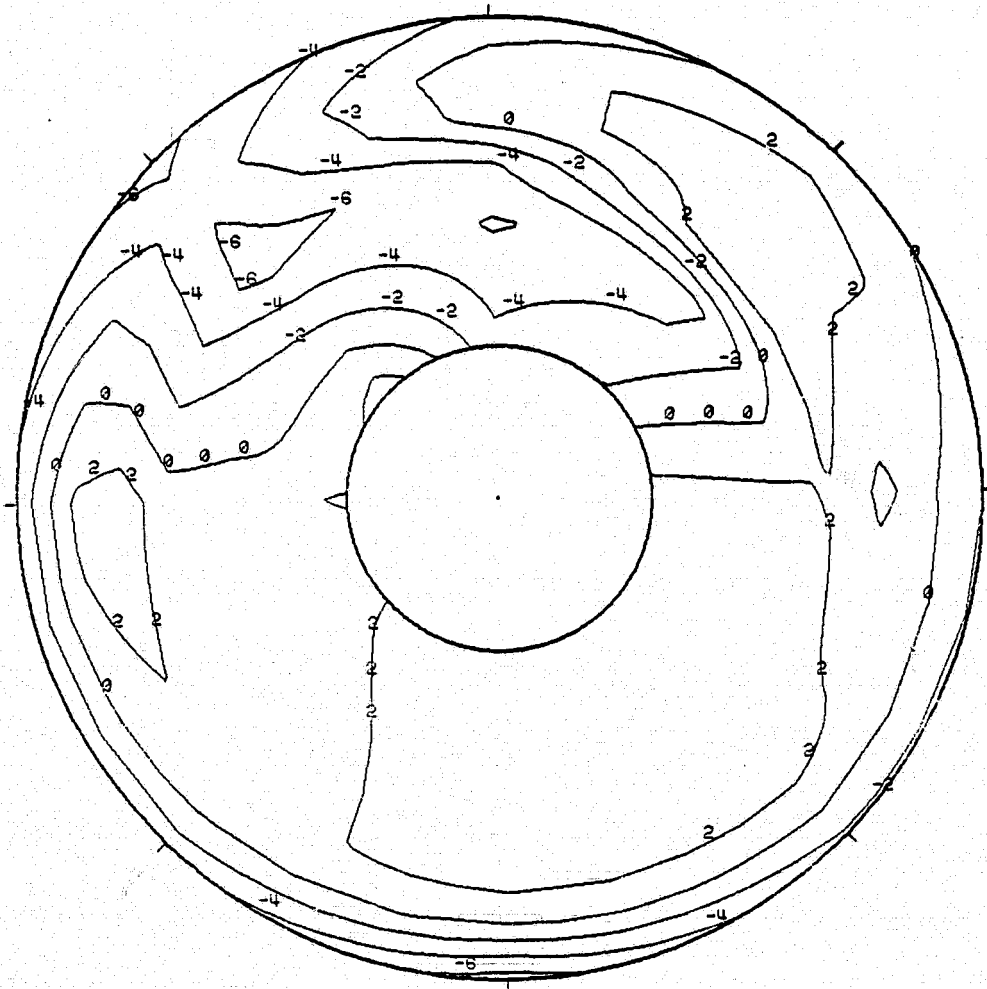
FIGURE G-49 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 / 5 IDENT. 49
THE SEGMENT START TIME WAS AT 0:27:21.090

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 18.7	BYPASS 0.0	WAT2 82.2%	CIVV -25.0
P1 44.13 (6.400)	P1/PS 1.000	KTHETA 0.323	KRA2 0.299	BKRA2 1.558	KA2 1.881	KC2 0.503	KOSP 0.410
							D2 0.107

49(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 500 Hz



MEAN FACE PRESSURE = 44.13 kPa (6.400 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.012195 SECONDS

FIGURE G-49 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 82.2\%$

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FSCP - NASA Data Study
 Part/Point = 353/12, Ident 50
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -23.90

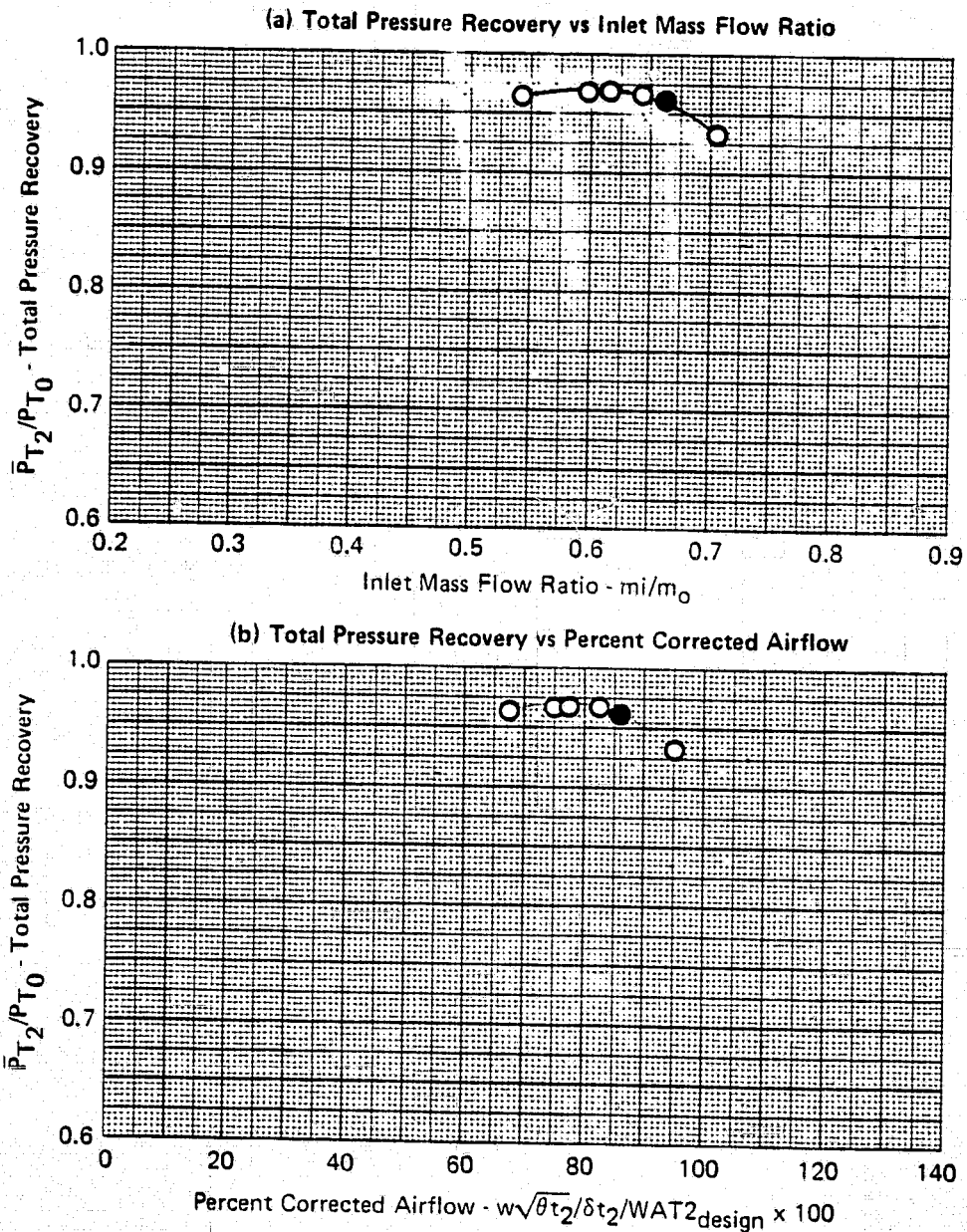
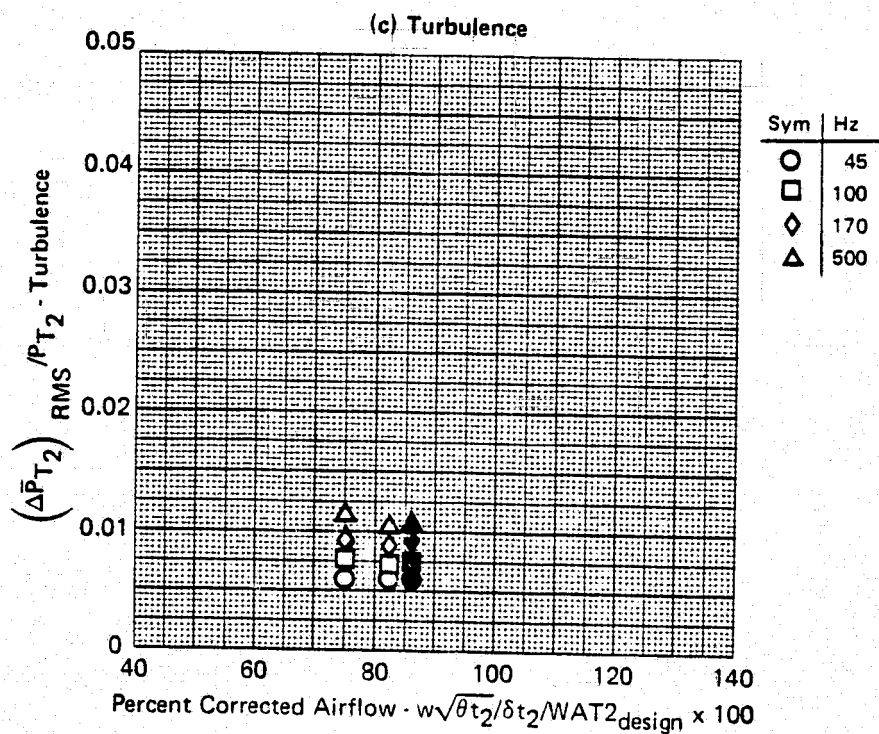


FIGURE G-50
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 85.4\%$

GP77-0658-1

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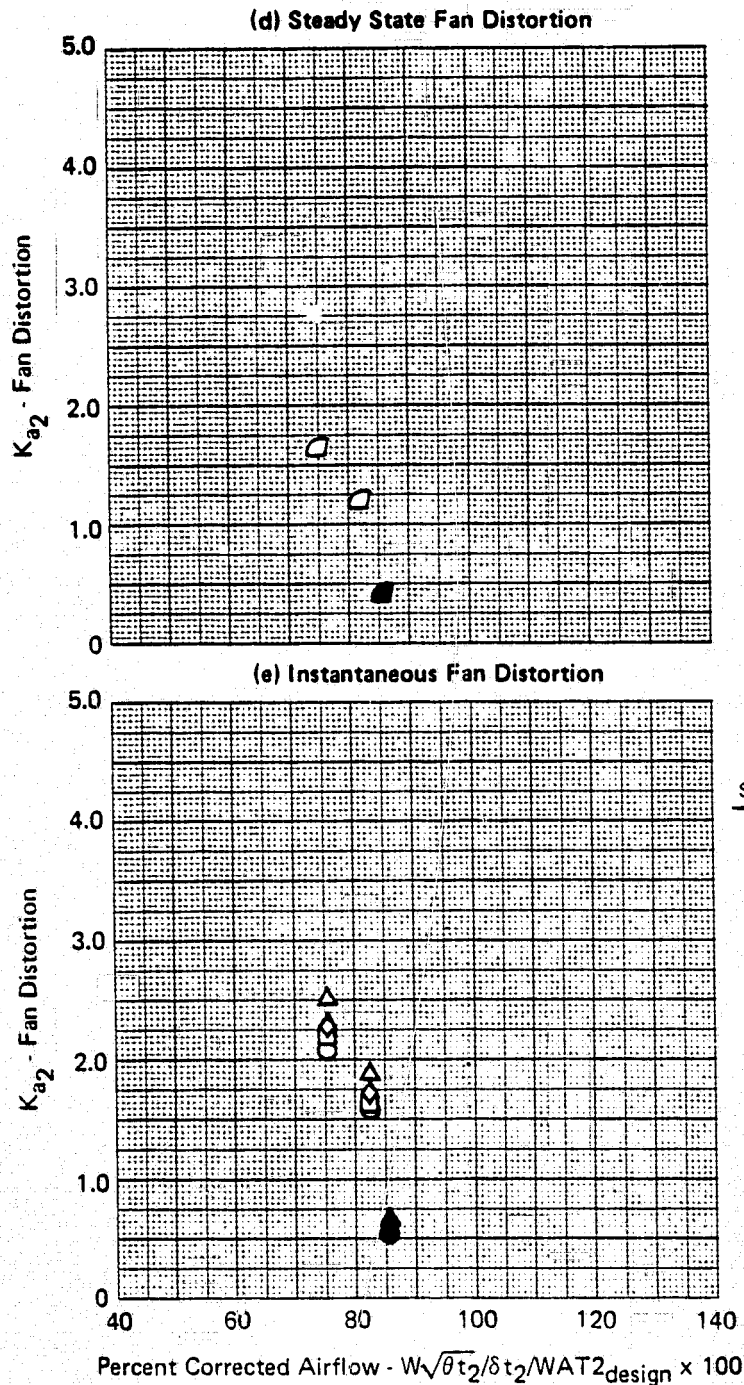
FSCP - NASA Data Study
 Part/Point - 353/12, Ident 50
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -23.90



GP77-0658-5

FIGURE G-50 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 85.4\%$

FSCP - NASA Data Study
 Part/Point - 353/12, Ident 50
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -23.90



GP77-0658-3

FIGURE G-50 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 85.4\%$

FSCP - NASA Data Study

Part/Point - 353/12, Ident 50

RHO DELTA3 BYPASS CIVV
-3.0 18.7 0.0 -23.90

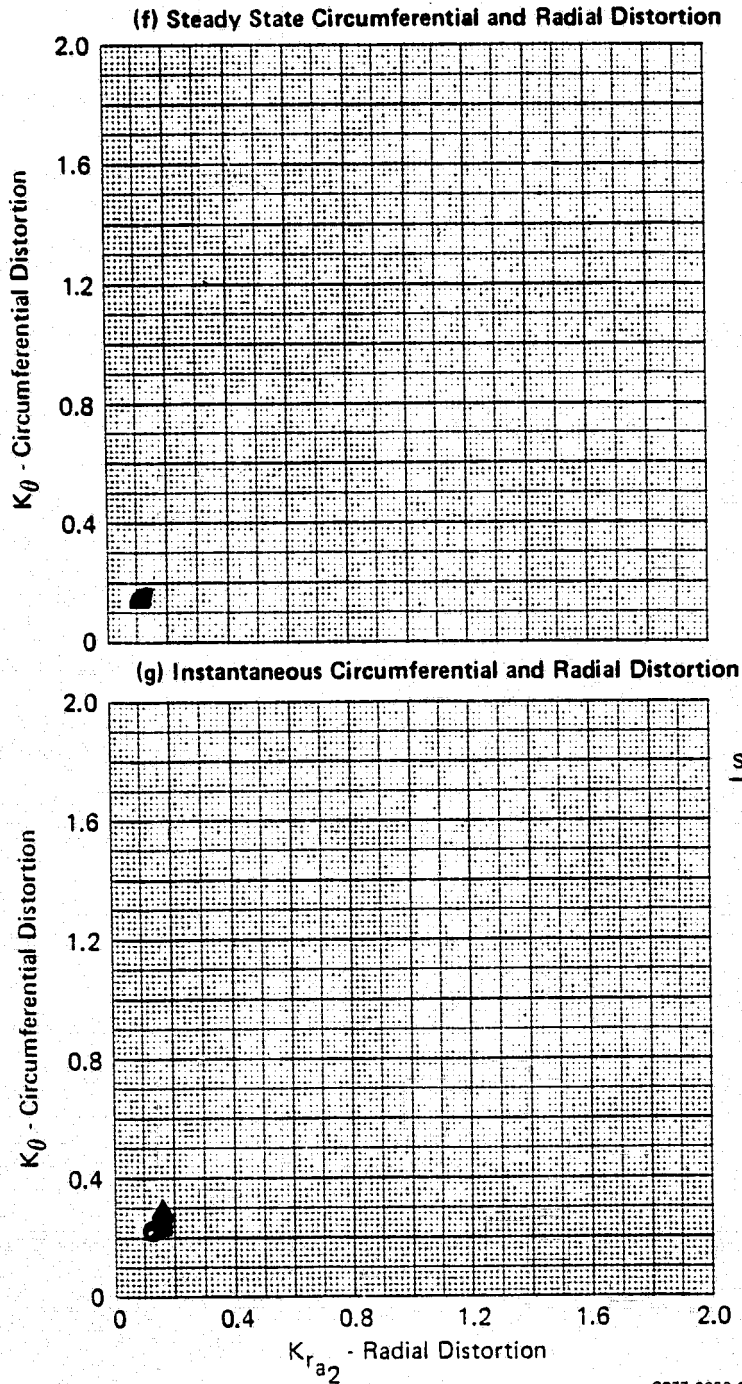
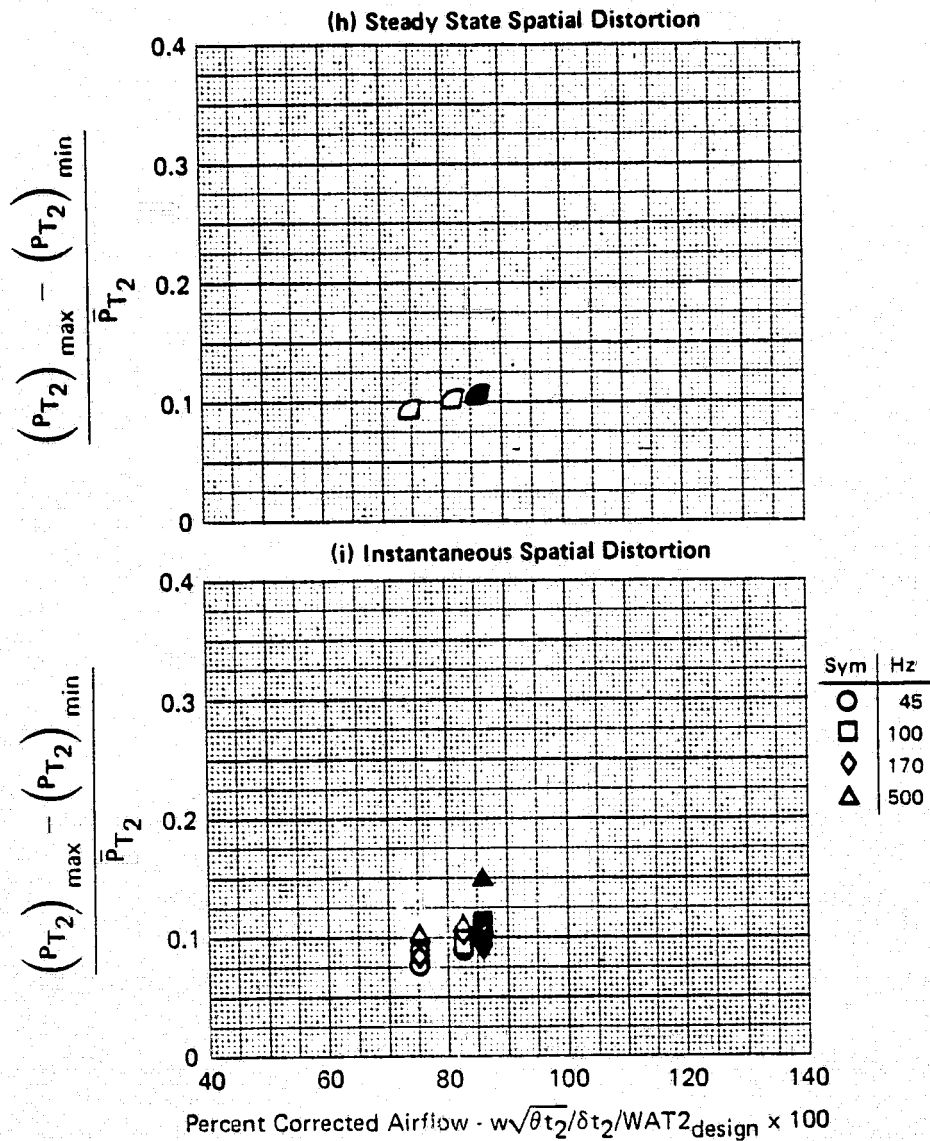


FIGURE G-50 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 85.4\%$

GP77-0658-2

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FSCP - NASA Data Study
 Part/Point - 353/12, Ident 50
 RHO DELTA3 BYPASS CIVV
 -3.0 18.7 0.0 -23.90



GP77-0858-4

FIGURE G-50 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 85.4\%$

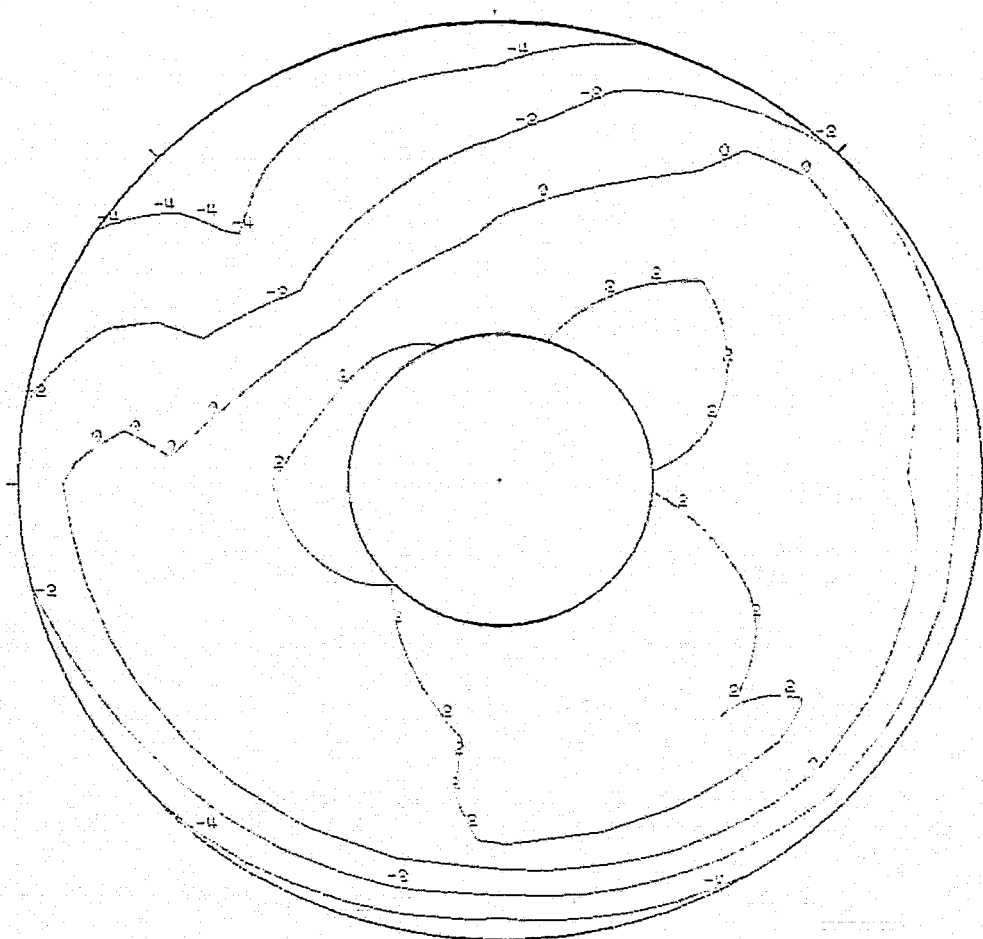
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FSCP - NASA DATA STUDY

DATA PART/POINT 353 /12 IDENT. 50
THE SEGMENT START TIME WAS AT 0:38:13.002

MACH 1.8	ALPHA -2	BETA 0	RHO -2.0	DEL T23 13.7	BYPASS 0.0	WAT2 85.4%	CIVV -29.9
P1 43.55 (6.316)	P1/P3 1.990	KTHETA 0.149	KPA3 0.113	BKPA3 0.163	KPA2 0.405	KCC 0.231	KESP 0.129
							D2 0.079

50 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 43.55 kPa (6.316 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-50 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 85.4 %

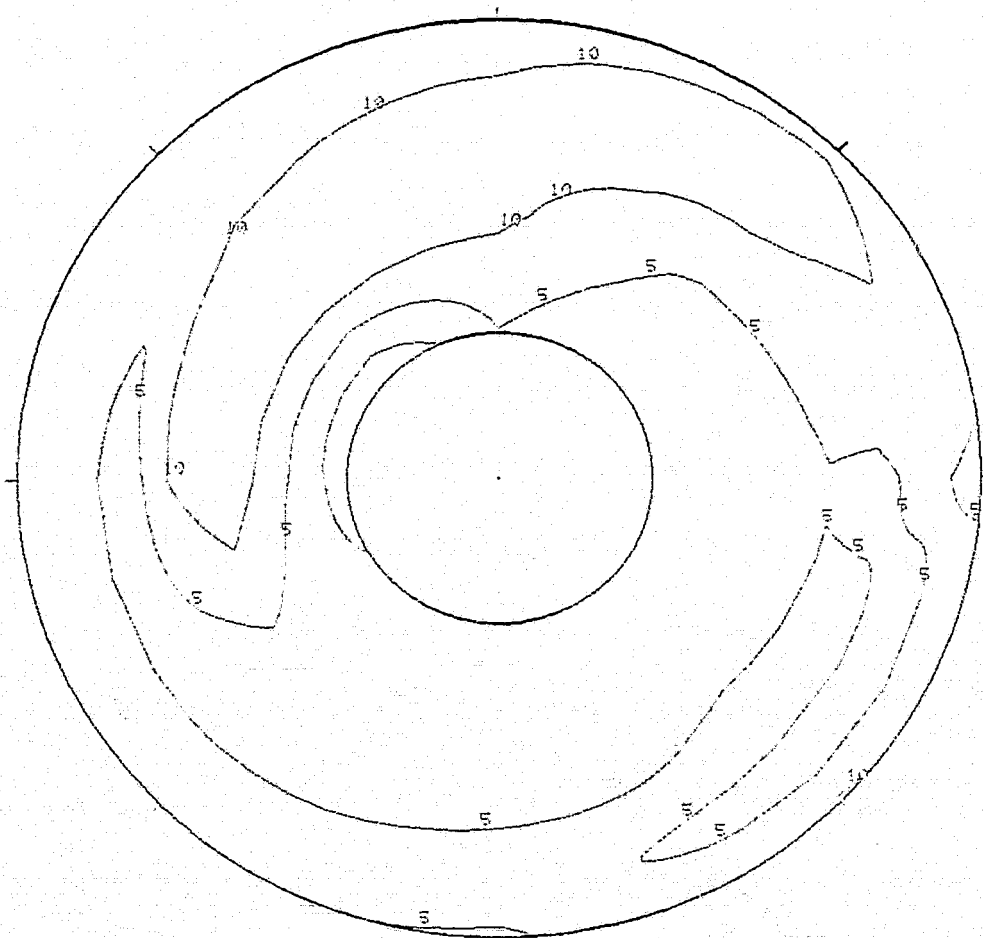
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FSCP - NASA DATA STUDY

DATA PART/POINT 353 /12 IDENT. 50
THE SEGMENT START TIME WAS AT 0:28:18.092

MACH	ALPHA	BETA	PHI	DELTA2	BYPASS	WAT2	CIVV
1.8	-2	0	-3.0	13.7	0.0	85.4%	-23.9

50 (k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00647

FIGURE G-50 (Continued)

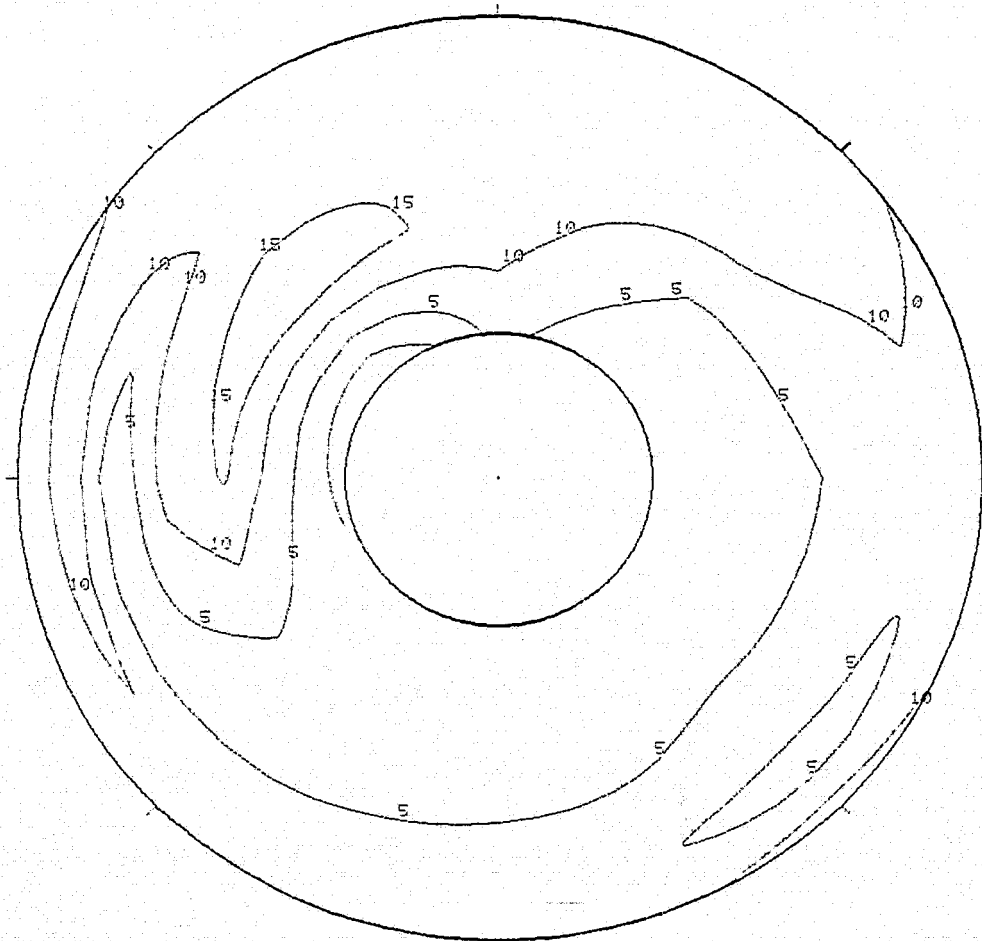
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 85.4\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 /12 IDENT. 50
THE SEGMENT START TIME WAS AT 0:23:12.091

MACH	ALPHA	BETA	PHI	DELTA3	BYPASS	WAT2	C1VW
1.8	-2	0	-3.9	13.7	0.0	85.4%	-23.9

50 (I) Turbulence Contour 100 Hz



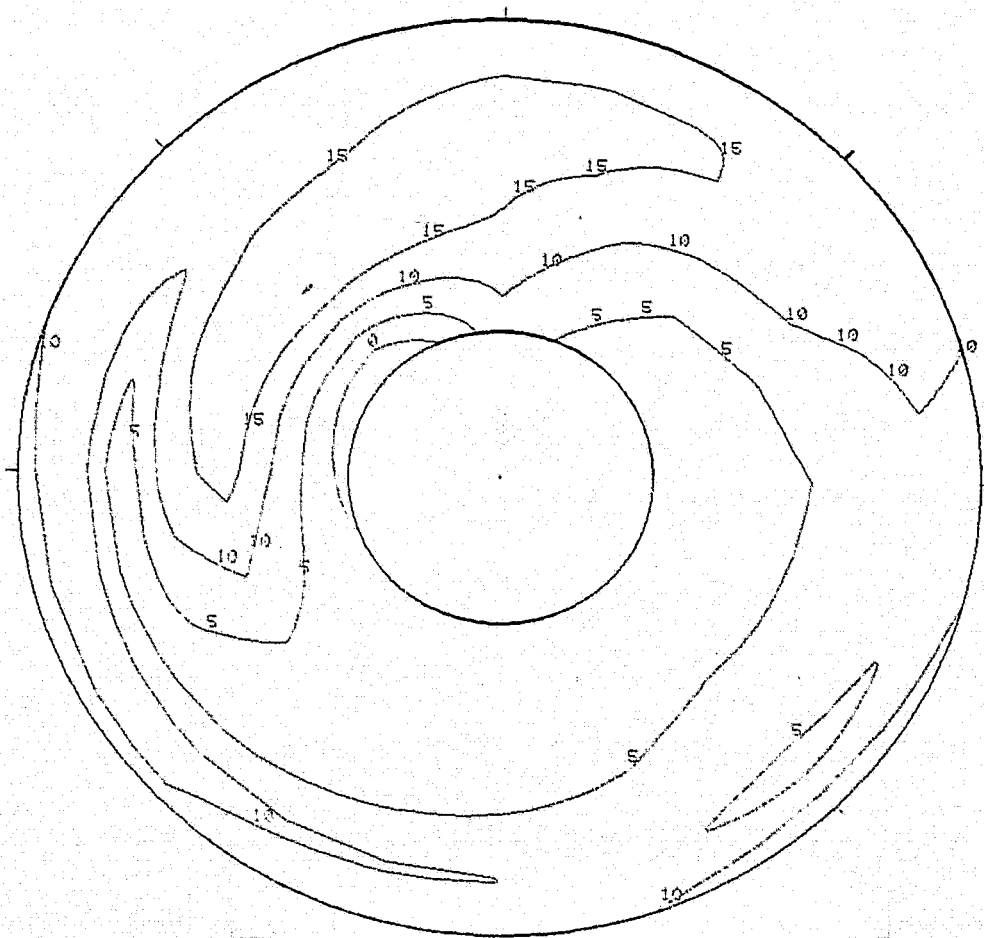
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00778
FIGURE G-50 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 85.4\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353/12 IDENT. 80
THE SEGMENT START TIME WAS AT 0:29:13.091

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
1.8	-2	0	-3.2	13.7	0.0	85.4%	-23.9

50(m) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00885
FIGURE G-50 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 85.4\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 /12 IDENT. 50
THE SEGMENT START TIME WAS AT 0:38:13.091

MACH
1.8

ALPHA
-2

BETA
0

RHO
-3.0

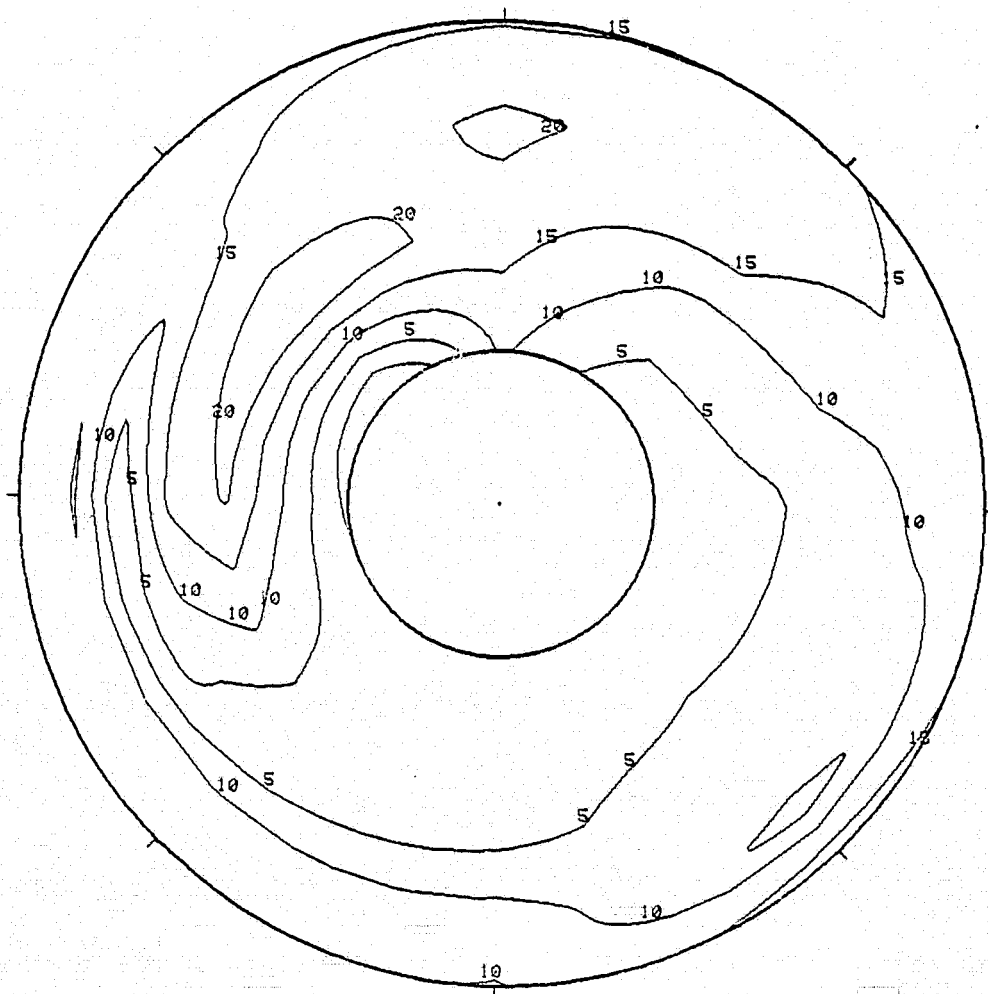
DELTA3
13.7

BYPASS
0.0

WAT2
85.4%

CIVV
-23.9

50(n)Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01082

FIGURE G-50 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

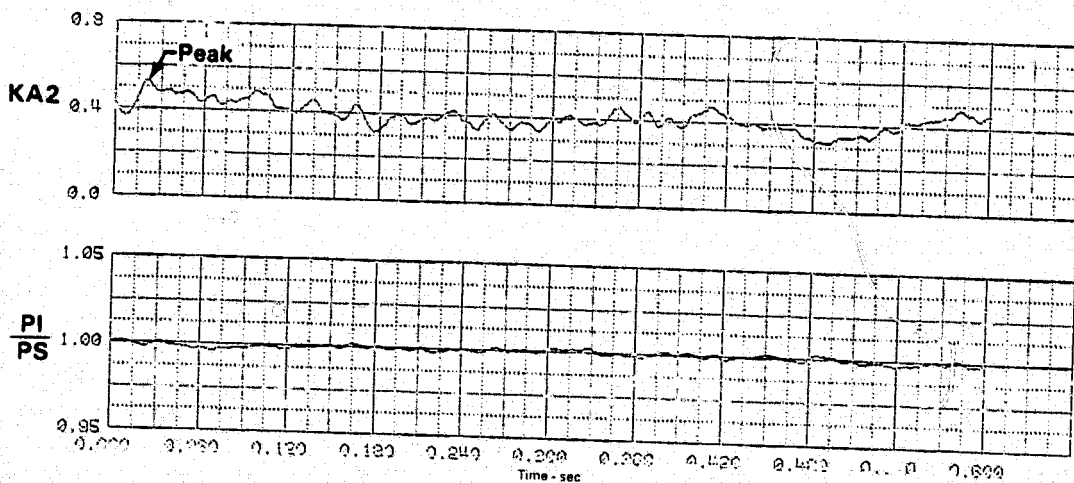
$M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 85.4\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353/12 IDENT. 50
THE SEGMENT START TIME WAS AT 0:22:18.032

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA2 13.7	BYPASS 0.0	WAT2 85.4%	QIVV -25.9
PI 43.48 (6.306)	PI/PS 0.993	KTHETA 0.231	KRA2 0.133	SKRA2 0.237	YAO 0.652	KC2 0.543	KQ3P 4.234
							DO 0.102

50(o) Time History Plots 45 Hz



PEAK AT TIME = 0.020558 SECONDS

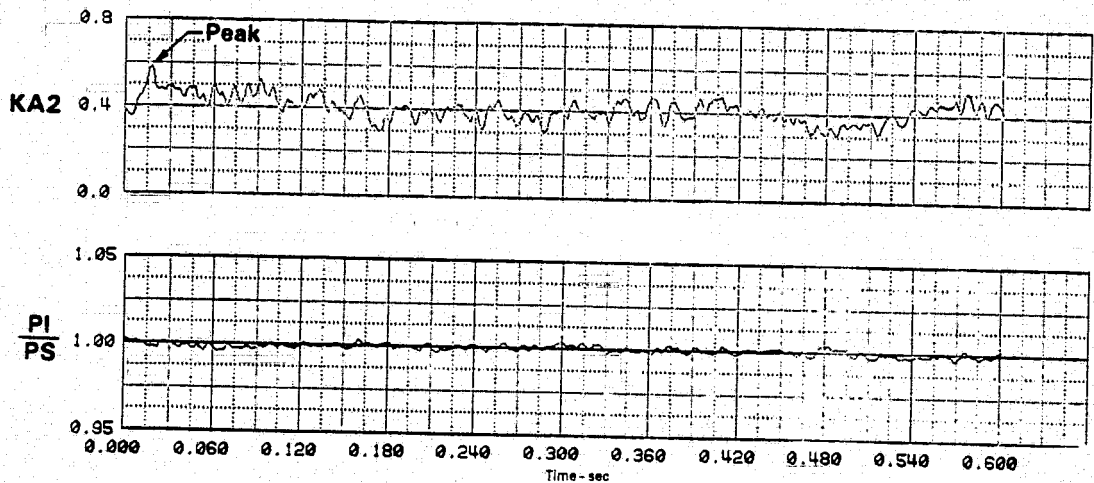
FIGURE G-50 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8, \alpha = -2.0, \beta = 0.0, WAT2 = 85.4\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 /12 IDENT. 50
THE SEGMENT START TIME WAS AT 0:29:18.091

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 18.7	BYPASS 0.0	WAT2 85.4%	CIVV -23.2
PI 43.45 (6.302)	PI/PS 0.938	KTHETA 0.247	KPA2 0.154	SKPA2 0.343	KQ2 0.350	KQ2 0.333	KQSP 0.275
							D2 0.096

50(p) Time History Plots 100 Hz



PEAK AT TIME = 0.017312 SECONDS

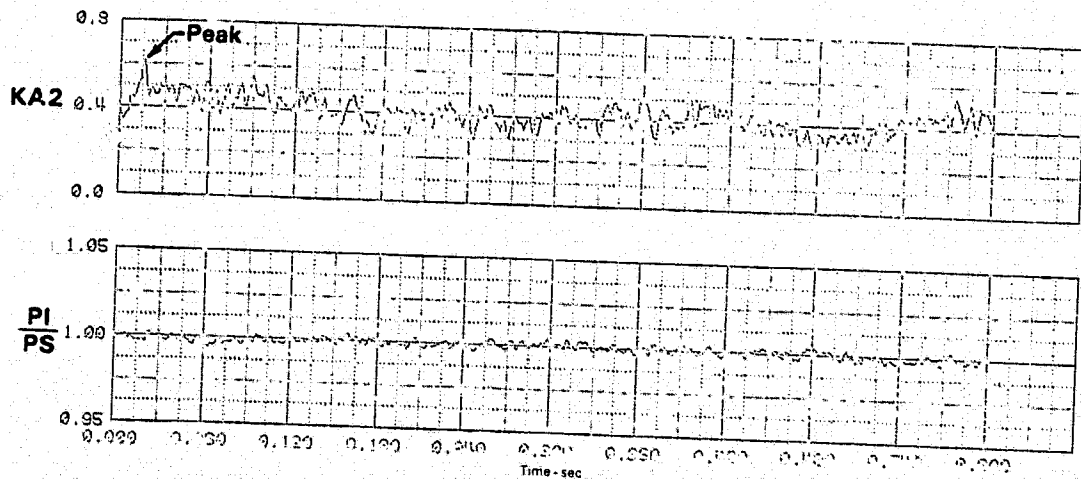
FIGURE G-50 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 85.4%

FSCP - NASA DATA STUDY

DATA PART/POINT 353 /12 IDENT. 50
THE SEGMENT START TIME WAS AT 0:23:18.091

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 13.7	BYPASS 0.0	WAT2 85.4%	QIVV -23.9
PI 43.43 (6.299)	PI/PS 0.997	KTHETA 0.257	KRA2 0.153	BKRA2 0.355	KP2 0.612	KC2 0.397	KCSP 0.903
							D2 0.094

50(q) Time History Plots 170 Hz



PEAK AT TIME = 0.016230 SECONDS

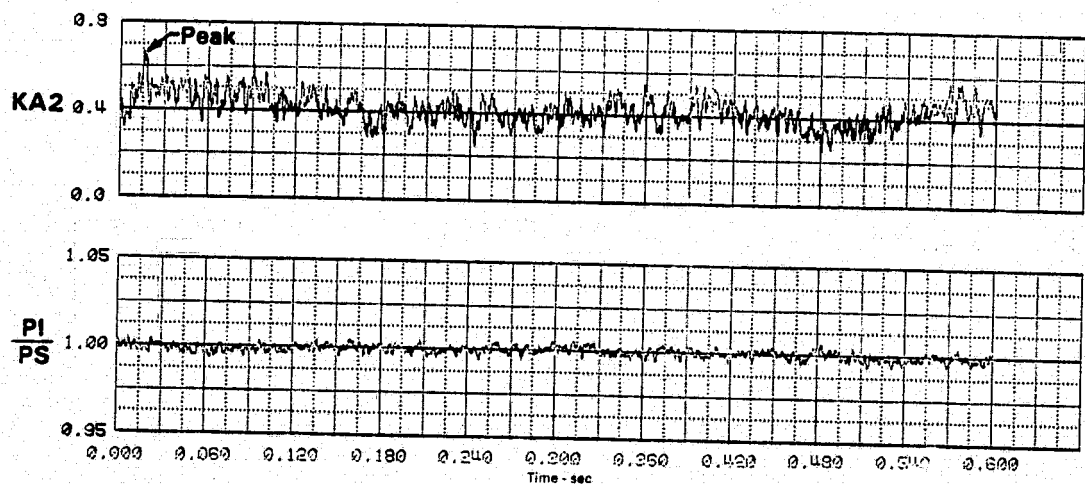
FIGURE G-50 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 85.4%

FSCP - NASA DATA STUDY

DATA PART/POINT 353 /12 IDENT. 50
THE SEGMENT START TIME WAS AT 0:39:18.091

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 18.7	BYPASS 0.0	WAT2 85.4%	CJVV -23.9
P1 43.45 (0.302)	PI/PS 0.998	KTHETA 0.299	KRA2 0.163	EKRA2 0.363	KA2 0.662	KC2 0.556	KOSP 0.357
							D2 0.124

50(r) Time History Plots 500 Hz



PEAK AT TIME = 0.015989 SECONDS

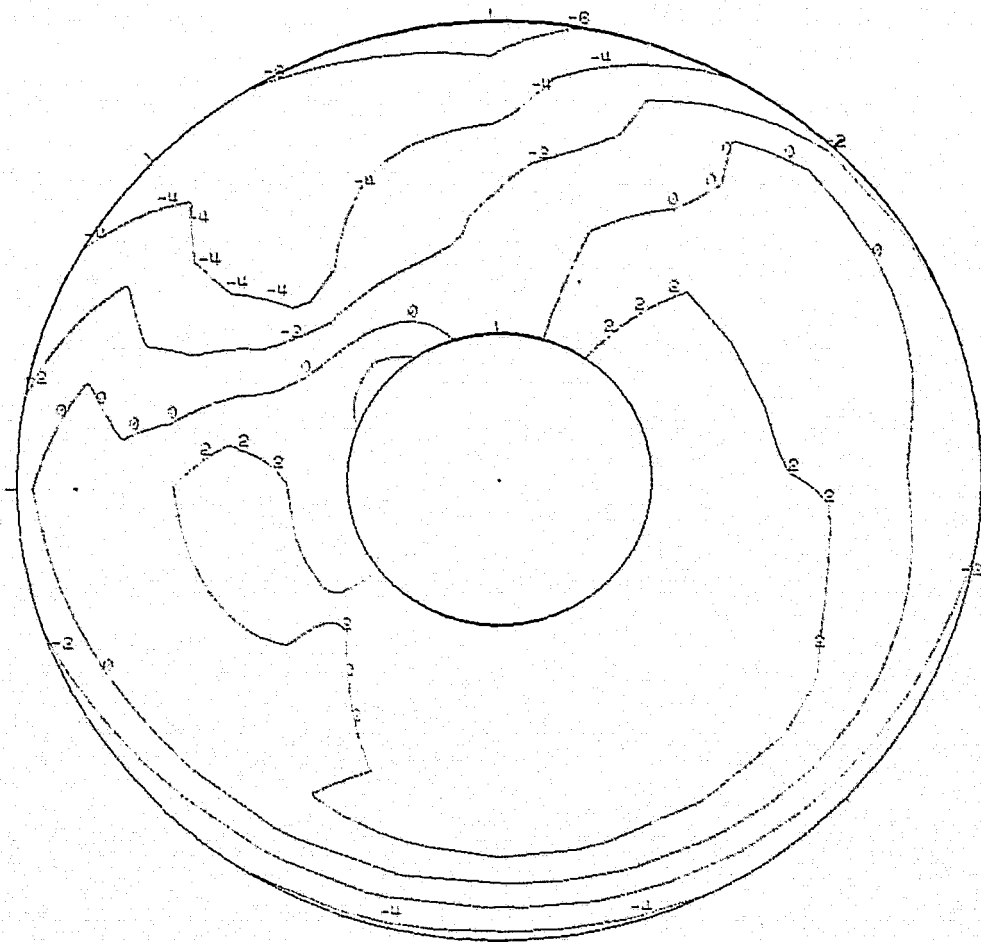
FIGURE G-50 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8, \alpha = -2.0, \beta = 0.0, WAT2 = 85.4\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 353 /12 IDENT. 60
THE SEGMENT START TIME WAS AT 0:39:19.092

MACH 1.3	ALPHA -2	BETA 0	RHO -3.0	DELTA3 13.7	BYPASS 0.0	WAT2 85.4%	CIVV -23.9
P1 43.48 (6.306)	P1/P3 0.993	KTHETA 0.231	KPA3 0.133	BKPA3 0.297	YB3 0.523	KO2 0.343	KOSP 0.234
							D2 0.102

50(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz



MEAN FACE PRESSURE = 43.48 kPa (6.306 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.020558 SECONDS

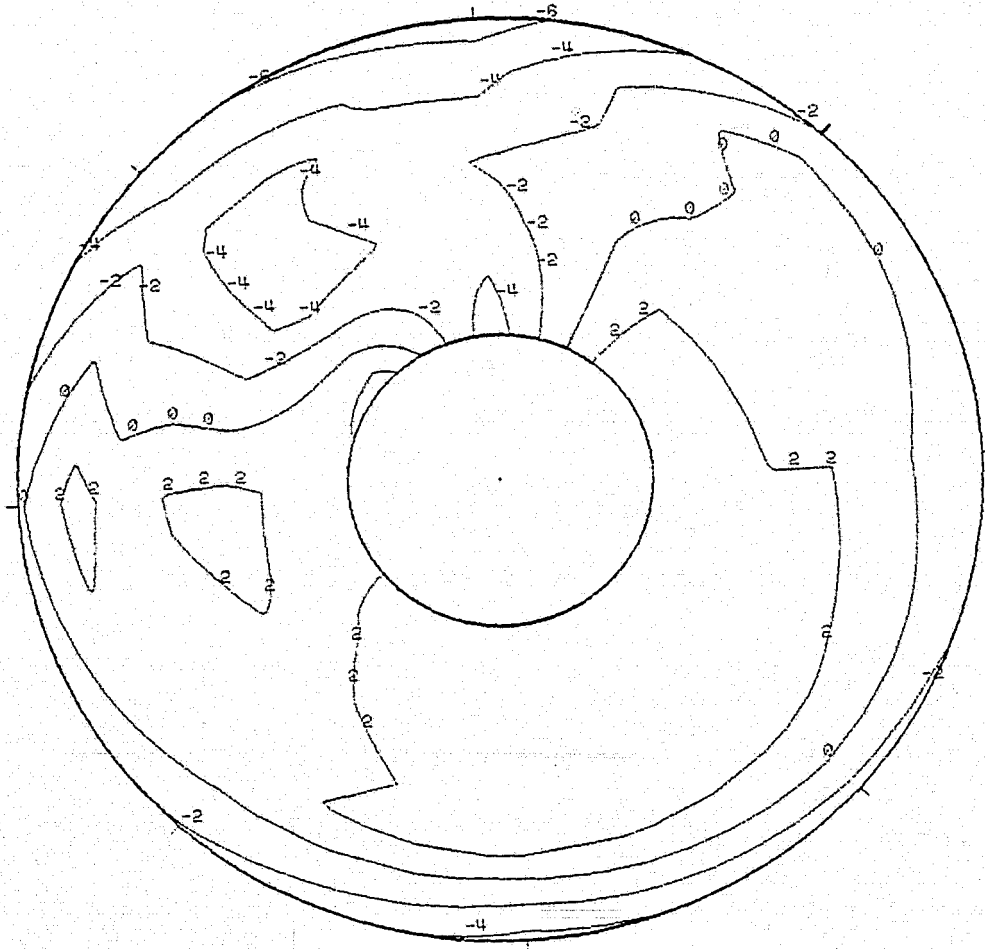
FIGURE G-50 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 85.4 %

FSCP - NASA DATA STUDY

DATA PART/POINT 353 /12 IDENT. 50
THE SEGMENT START TIME WAS AT 0:29:18.001

MACH 1.8	ALPHA -2	BETA 0	PHO -3.0	DELTA2 13.7	BYPASS 0.0	WAT2 85.4%	CIVV -23.3
P1 43.45 (6.302)	PI/PS 0.993	KTHETA 0.20	KPA2 0.154	BKPA2 1.303	KQ2 0.330	KC2 0.332	KOSP 0.275
							D2 0.096

50(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
- 100 Hz



MEAN FACE PRESSURE = 43.45 kPa (6.302 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.017312 SECONDS

FIGURE G-50 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 85.4 %

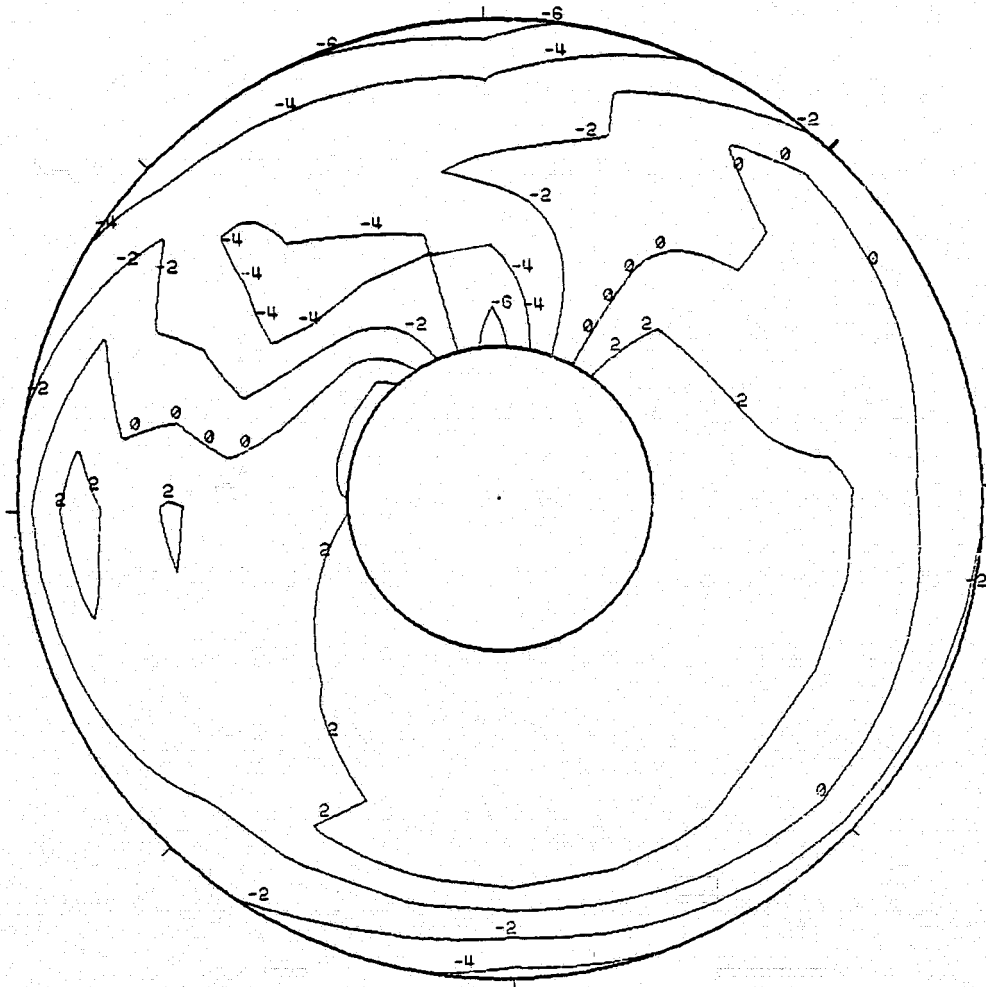
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FSCP - NASA DATA STUDY

DATA PART/POINT 353 /12 IDENT. 80
THE SEGMENT START TIME WAS AT 0:38:18.091

MACH 1.8	ALPHA -2	BETA 0	RHO -3.0	DELTA3 18.7	BYPASS 0.0	WAT2 85.4%	CIVV -23.9
PI 43.43 (6.299)	PI/PS 0.997	KTHETA 0.257	KRA2 0.159	BKRA2 0.355	KA2 0.612	KC2 0.397	KOSP 0.303
							D2 0.094

50(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 43.43 kPa (6.299 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.016230 SECONDS

FIGURE G-50 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 85.4 %

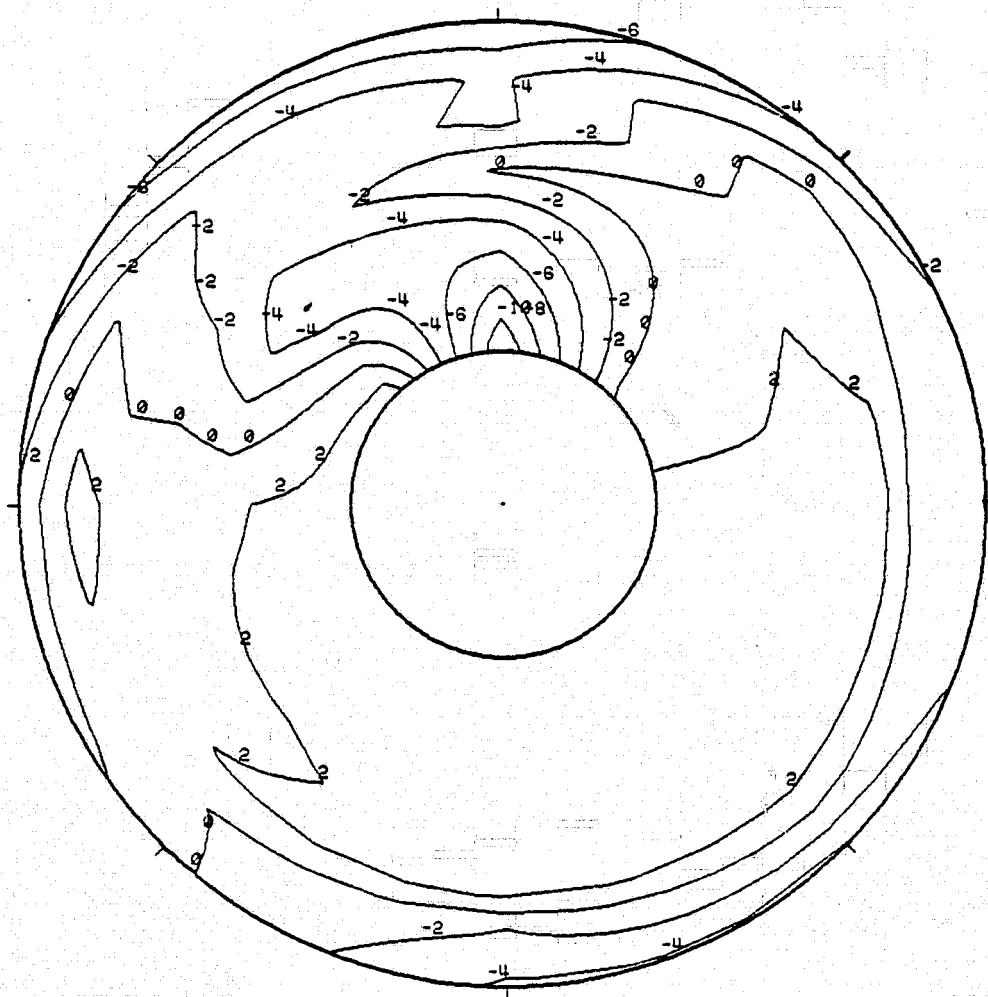
FSCP - NASA DATA STUDY

DATA PART/POINT 353 /12 IDENT. 50
THE SEGMENT START TIME WAS AT 0:38:18.091

MACH 1.8 ALPHA -2 BETA 0 RHO -3.0 DELTA3 18.7 BYPASS 0.0 WAT2 85.4% CIVV -23.9

PI 43.45 (6.302) P1/PS 0.998 KTHETA 0.299 KRA2 0.163 BKRA2 0.363 KA2 0.662 KC2 0.556 KOSP 0.357 D2 0.124

**50(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz**



MEAN FACE PRESSURE = 43.45 kPa (6.302 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.015989 SECONDS

FIGURE G-50 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 85.4 %

FSE - NASA Data Study
 Part/Point - 523/2, Ident 51
 RHO DELTA3 BYPASS CIVV
 -2.9 18.6 0.0 -25.00

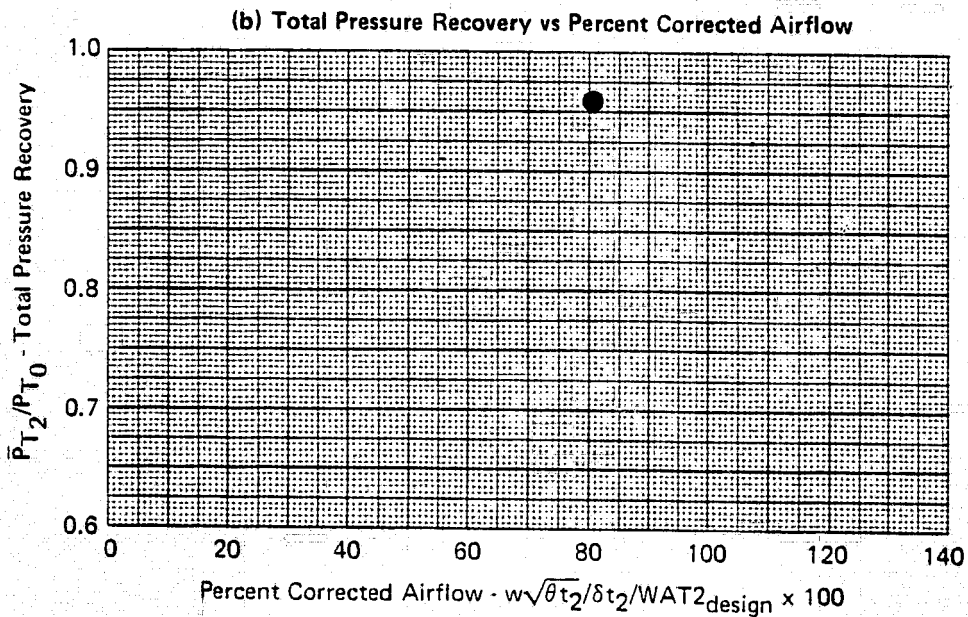
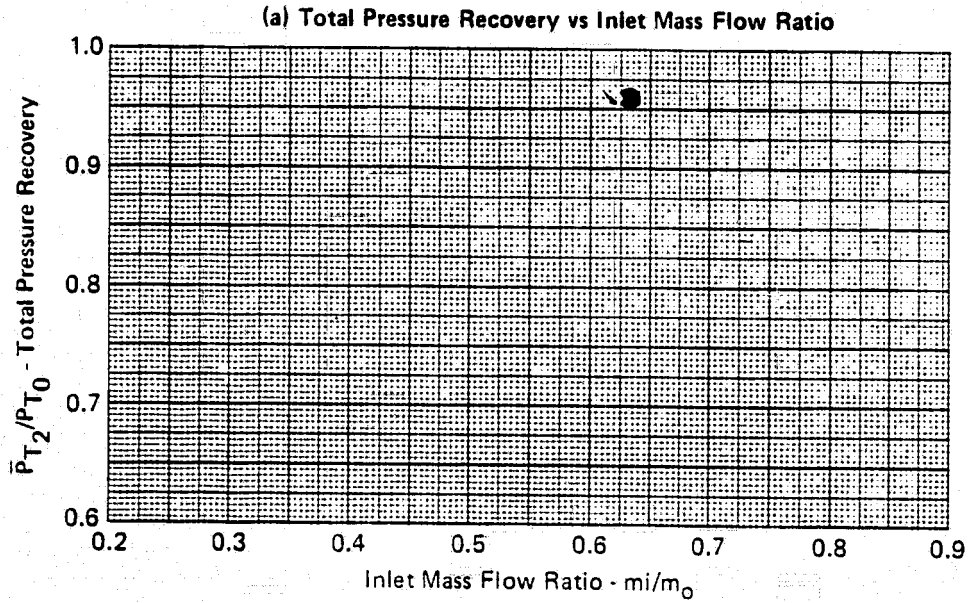


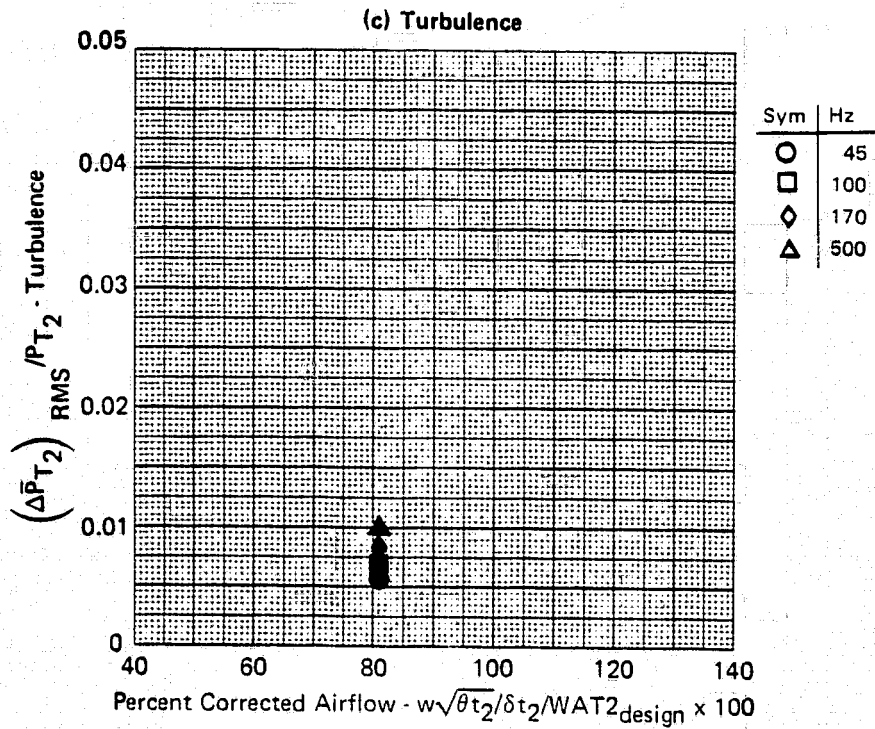
FIGURE G-51
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.6\%$

GP77-0658-1

FSE - NASA Data Study

Part/Point - 523/2, Ident 51

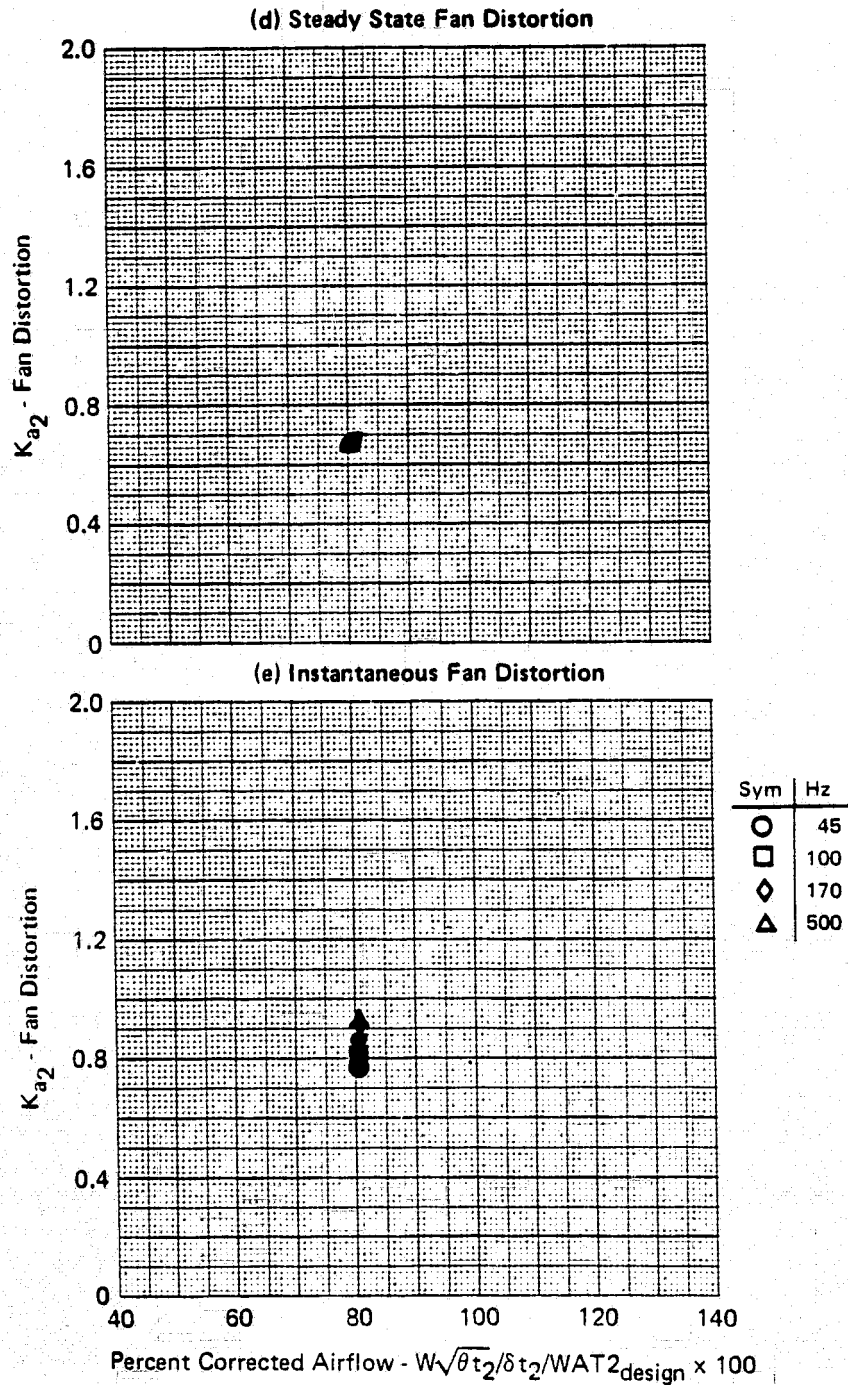
RHO DELTA3 BYPASS CIVV
-2.9 18.6 0.0 -25.00



GP77-0658-5

FIGURE G-51 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.6\%$

FSE - NASA Data Study
 Part/Point - 523/2, Ident 51
 RHO DELTA3 BYPASS CIVV
 -2.9 18.6 0.0 -25.00



GP77-0658-3

FIGURE G-51 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8, \alpha = -2.0, \beta = 0.0, WAT2 = 80.6 \%$

FSE - NASA Data Study
 Part/Point - 523/2, Ident 51
 RHO DELTA3 BYPASS CIVV
 -2.9 18.6 0.0 -25.00

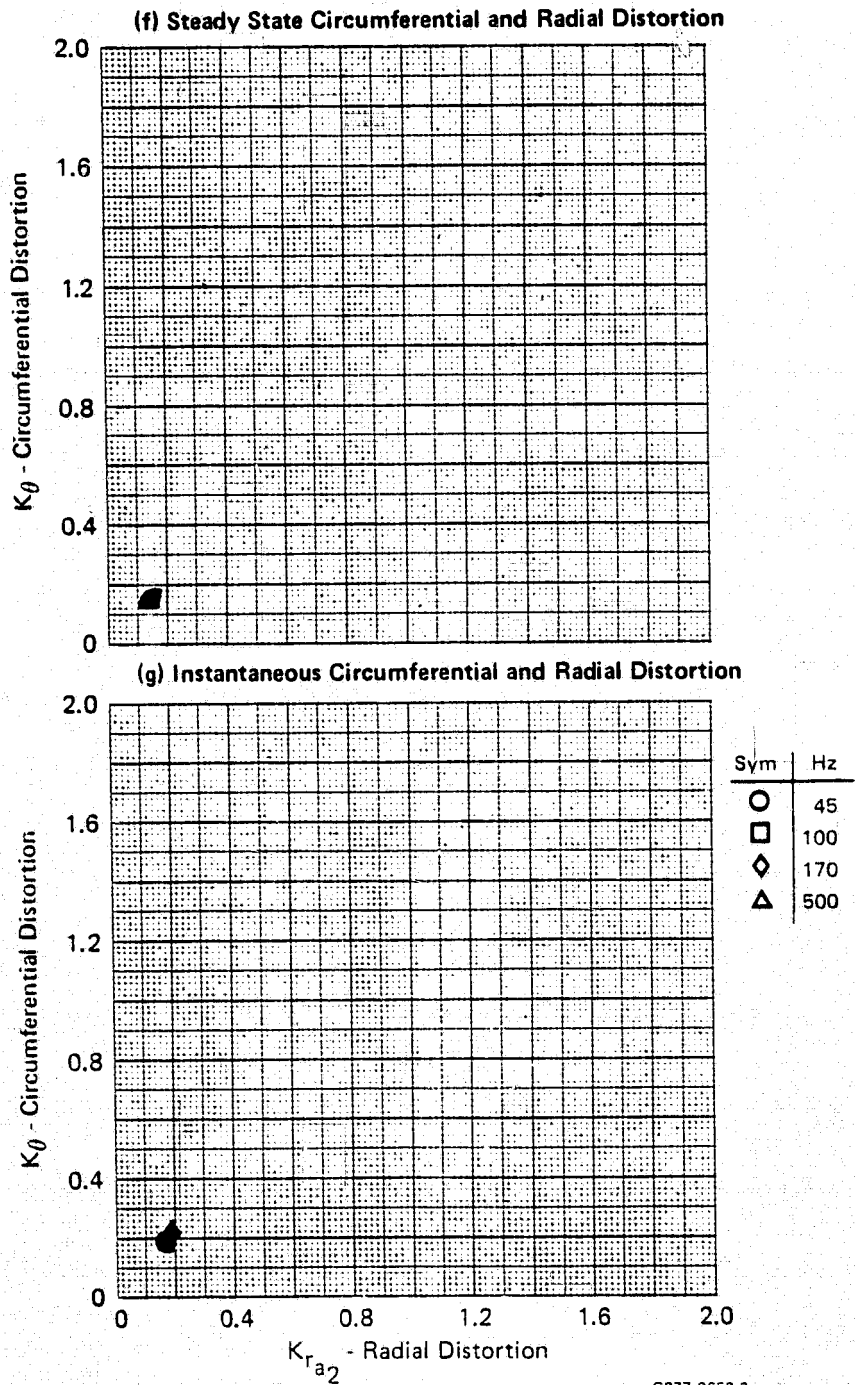
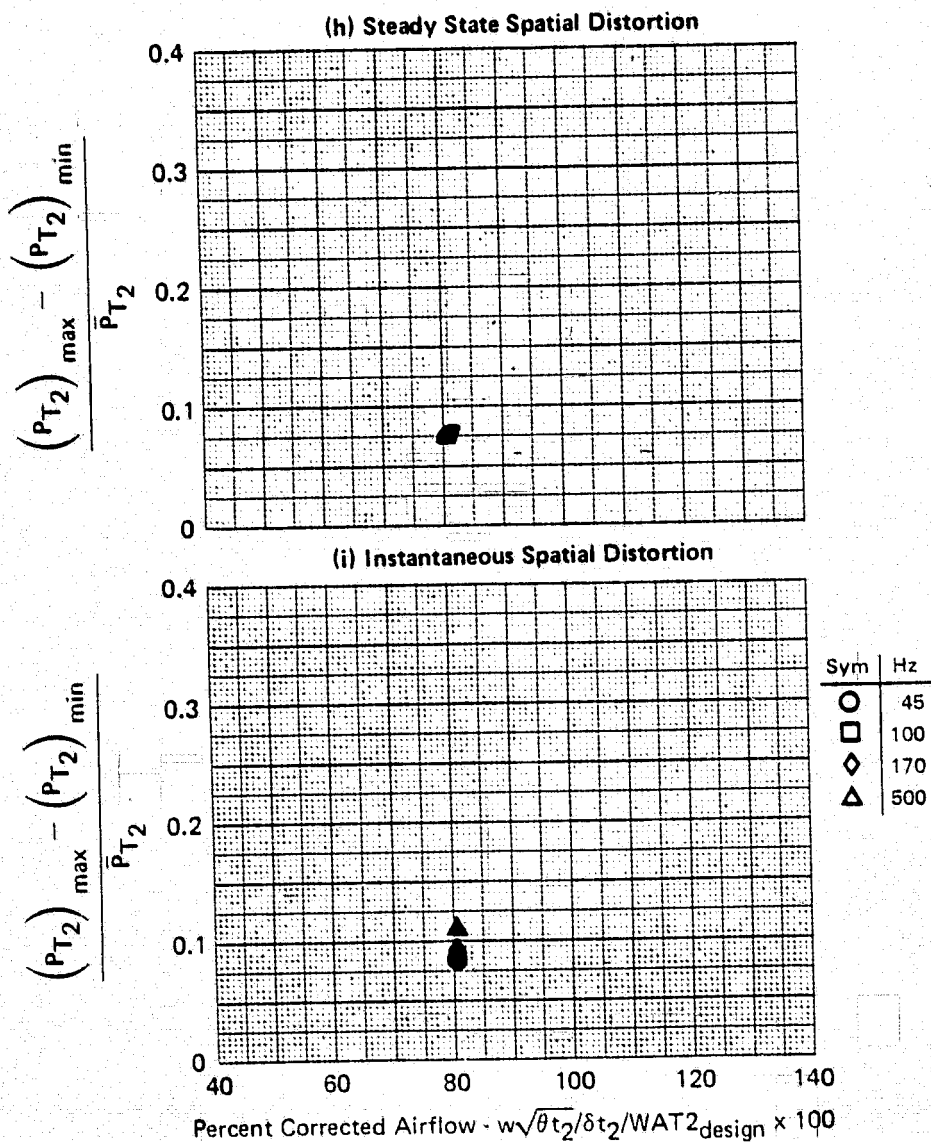


FIGURE G-51 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.6 %

FSE - NASA Data Study
 Part/Point - 523/2, Ident 51
 RHO DELTA3 BYPASS CIVV
 -2.9 18.6 0.0 -25.00



GP77-0858-4

FIGURE G-51 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.6\%$

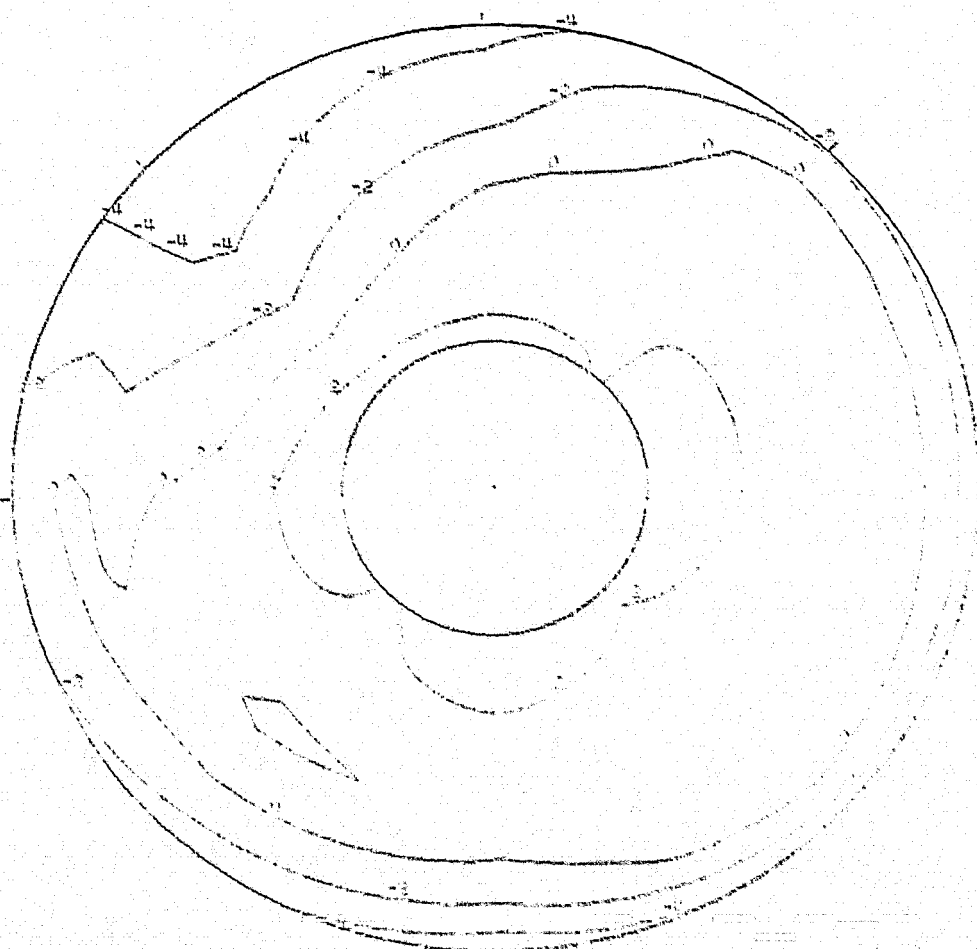
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FSE - NASA DATA STUDY

DATA PART/POINT 523 / 2 IDENT. 51
THE SEGMENT START TIME WAS AT 2145:27.170

MACH 1.8	ALPHA -2	BETA 0	RHO -2.3	DELTA3 13.6	BYPASS 0.0	WAT2 80.6%	CIVV -25.3
PI1 43.86 (6.362)	PI103 1.000	KTHETA 0.142	KR01 0.143	KR02 0.121	KR03 1.000	KR04 0.143	KR05 0.173

51 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 43.86 kPa (6.362 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-51 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.6\%$

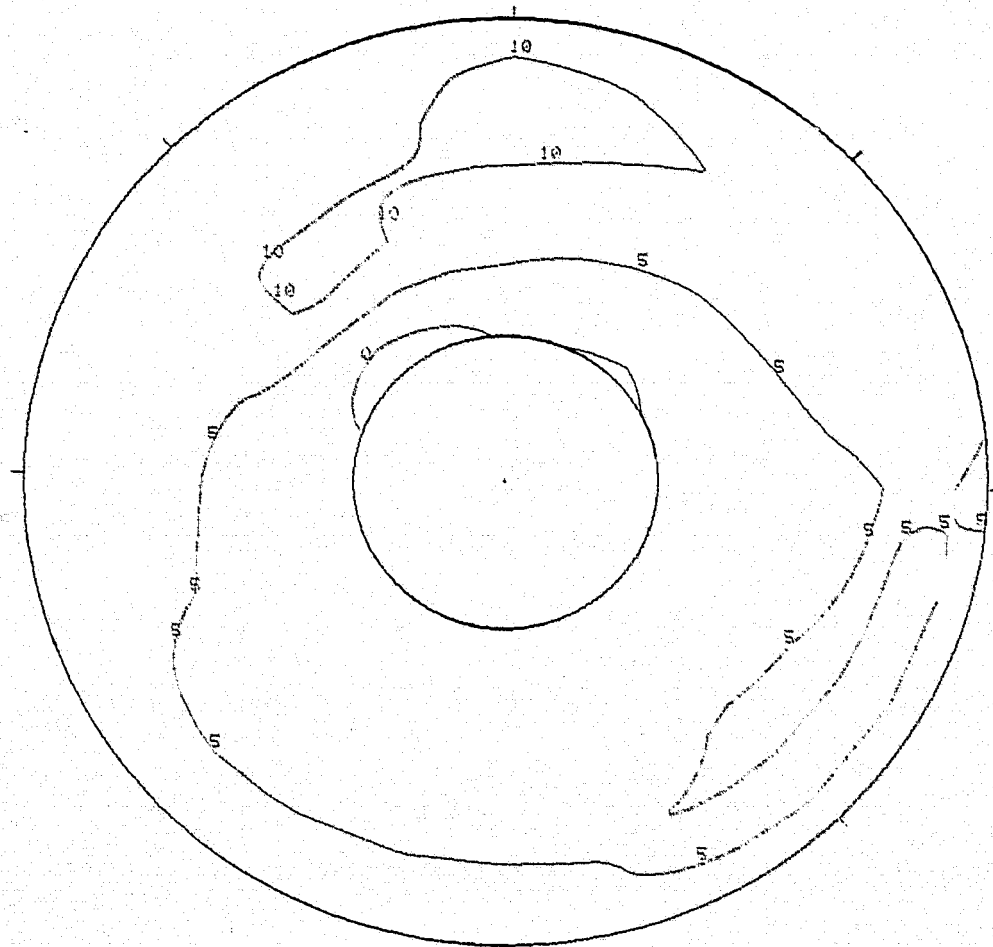
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FSE - NASA DATA STUDY

DATA PART/POINT 523 / 2 IDENT. 51
THE SEGMENT START TIME WAS AT 2:45:27.170

MACH 1.8 ALPHA -2.0 BETA 0.0 RHO -2.3 DELTA3 15.3 BYPASS 0.0 WAT2 80.6% CIVV -25.0

51(k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00564

FIGURE G-51 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.6\%$

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FSE - NASA DATA STUDY

DATA PART/POINT 523 / 2 IDENT. 51
THE SEGMENT START TIME WAS AT 2:45:27.091

MACH
1.3

ALPHA
-3

BETA
0

PHO
-2.9

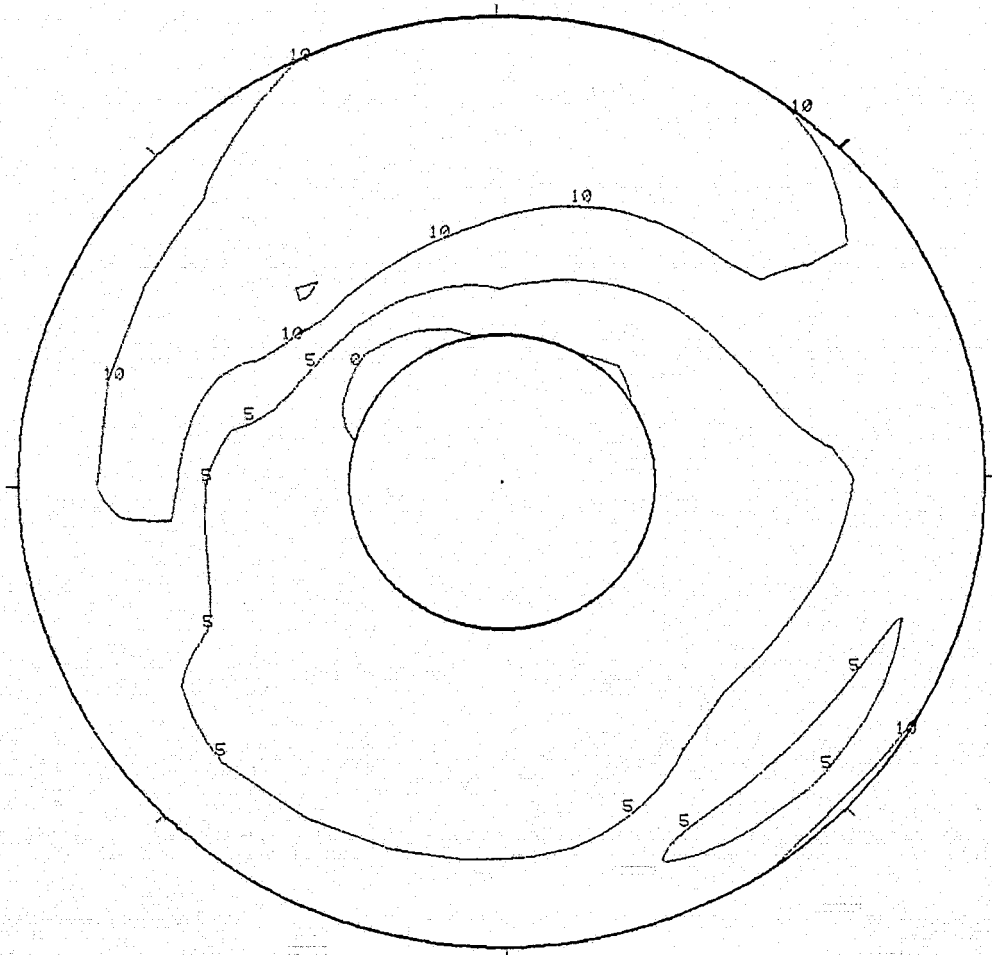
DELTA3
13.6

BYPASS
0.9

WAT2
80.6%

CIVV
-25.0

51 (I) Turbulence Contour 100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00689

FIGURE G-51 (Continued)

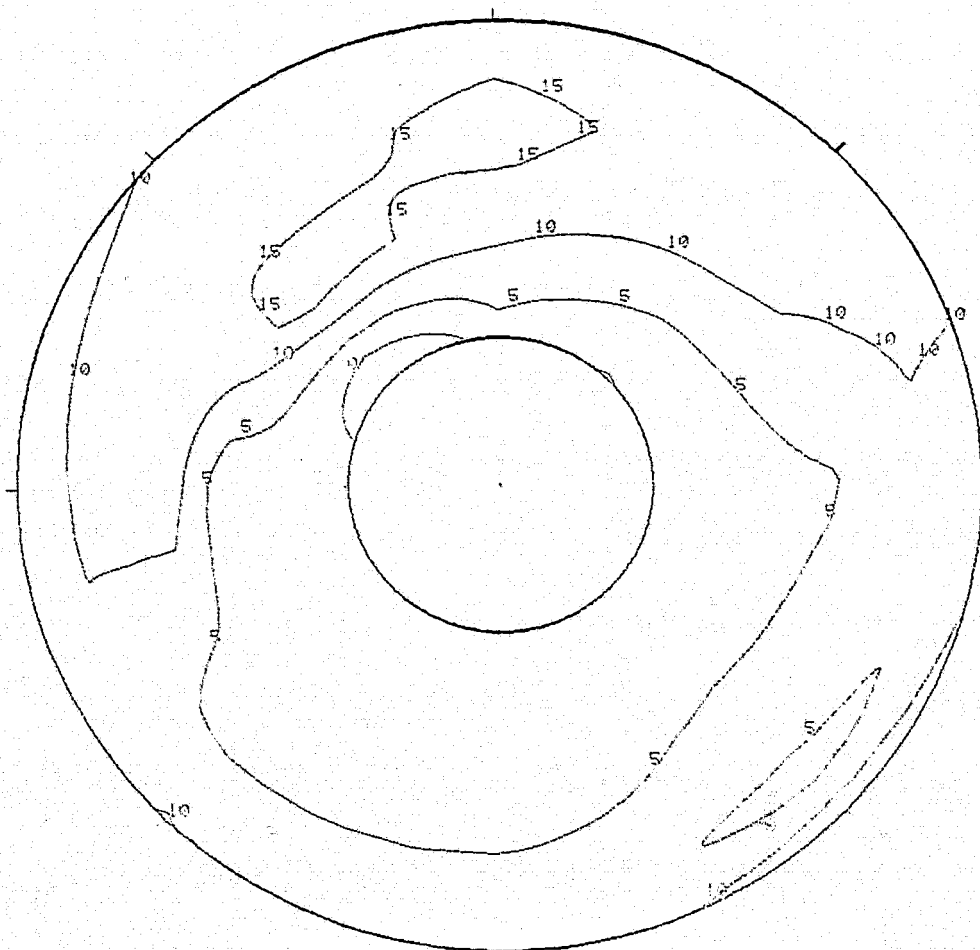
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.6\%$

FSE - NASA DATA STUDY

DATA PART/POINT 523 / 2 IDENT. **51**
THE SEGMENT START TIME WAS AT 2:45:27.091

MACH 1.8	ALPHA -2	BETA 0	RHO -2.3	DELTA2 18.6	BYPASS 9.9	WAT2 80.6%	CIVV -25.3
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51(m) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00800

FIGURE G-51 (Continued)

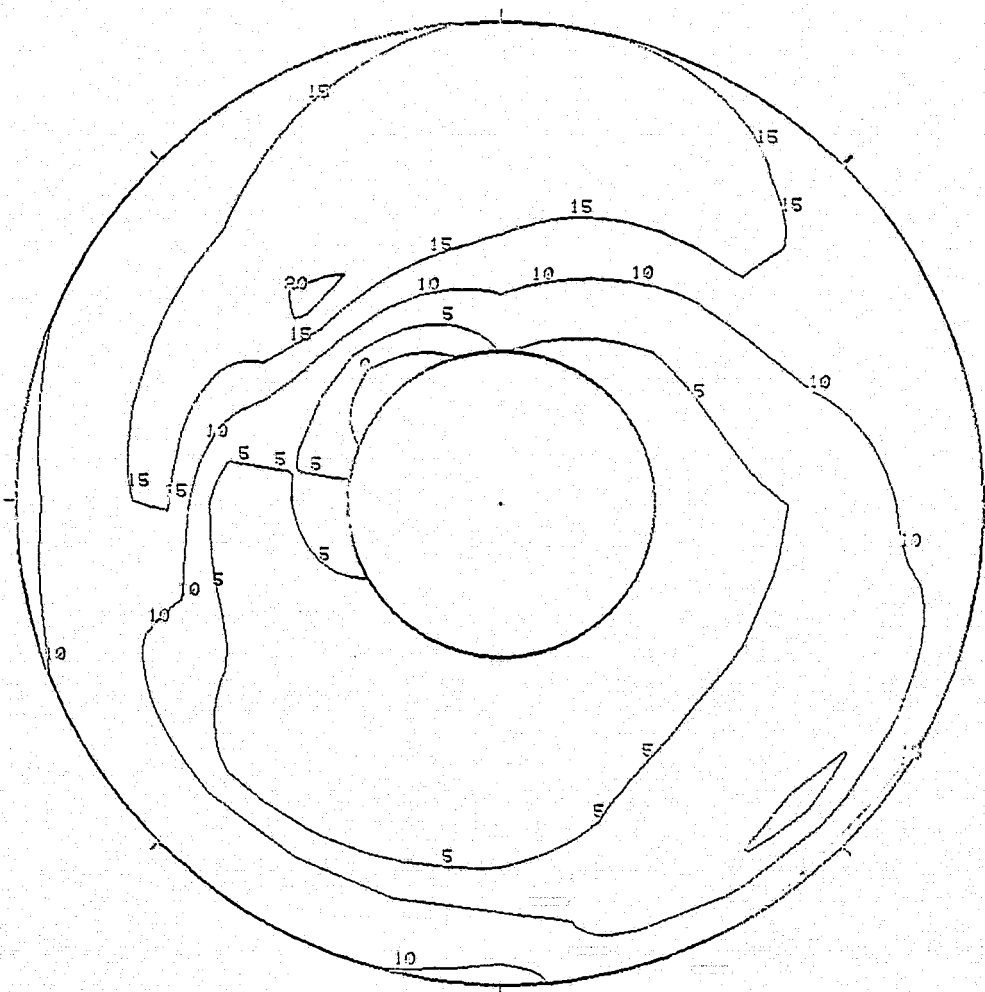
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.6\%$

FSE - 1939 DATA STUDY

DATA PART/POINT 523 / 2 IDENT. 51
THE SEGMENT START TIME WAS AT 2:45:27.000

MACH	ALPHA	BETA	RHO	DELTA	WAT2	WAT2	CLIM
1.8	-2	0	-2.9	10.3	0.0	80.6%	-25.0

51(n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00991

FIGURE G-51 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.6 %

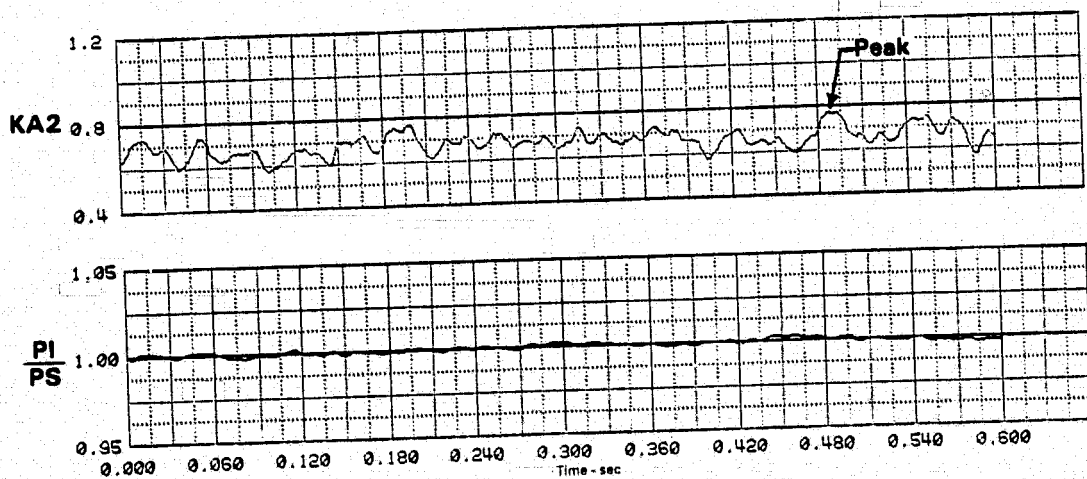
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FSE - NASA DATA STUDY

DATA PART/POINT 523 / 2 IDENT. 51
THE SEGMENT START TIME WAS AT 2:45:27.170

MACH 1.8	ALPHA -2	BETA 0	RHO -2.9	DELTA3 12.6	BYPASS 0.0	WAT2 80.6%	CTVV -25.0
PI 43.89 (0.365)	PI/PS 1.090	KTHETA 0.191	KPA2 0.160	BKSC2 0.532	KAS 0.772	KCS 0.250	KOSP 9.162
							D2 0.027

51(o) Time History Plots 45 Hz



PEAK AT TIME = 0.486900 SECONDS

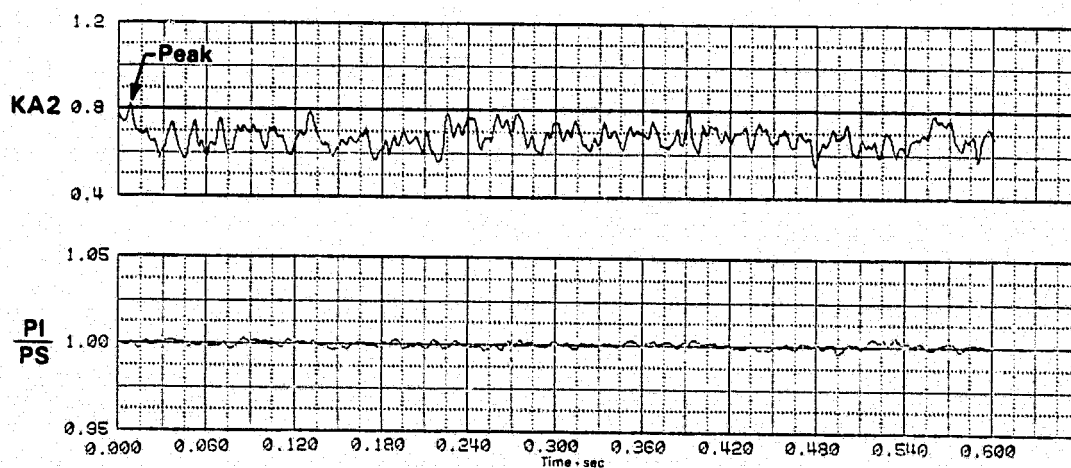
FIGURE G-51 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.6%

FSE - NASA DATA STUDY

DATA PART/POINT 523 / 2 IDENT. 51
THE SEGMENT START TIME WAS AT 2:45:27.091

MACH 1.8	ALPHA -2	BETA 0	RHO -2.9	DELTA2 18.6	BYPASS 0.0	WAT2 80.6%	CIVV -25.0
P1 43.88 (6.364)	P1/P2 1.000	KTHETA 0.186	KPA2 0.174	BKPA2 0.634	KQ2 0.322	KQ2 0.295	KQ2P 0.170
							D2 0.035

51(p) Time History Plots 100 Hz



PEAK AT TIME = 0.007574 SECONDS

FIGURE G-51 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.6%

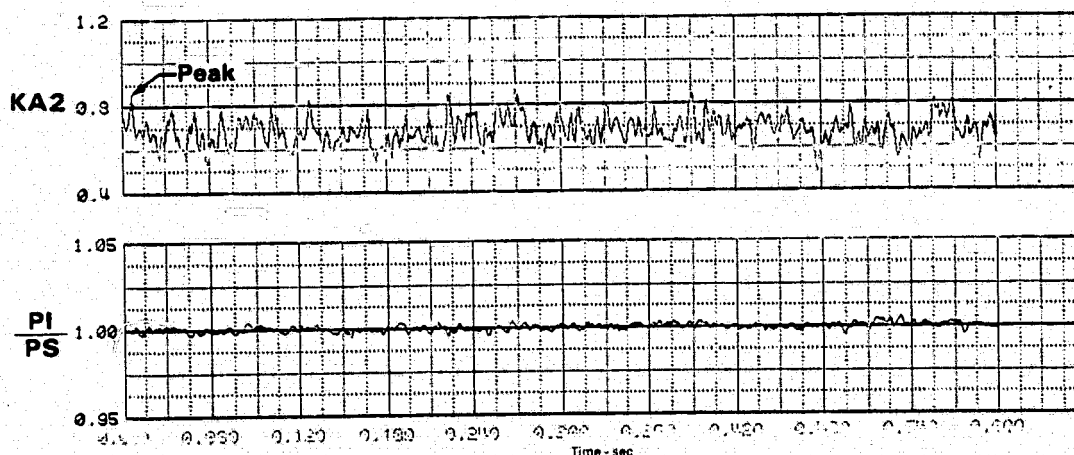
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FSE - NASA DATA STUDY

DATA PART/POINT 523 / 2 IDENT. 51
THE SEGMENT START TIME WAS AT 2:45:27.031

MACH 1.8	ALPHA -2	BETA 0	RHO -2.9	DELTA2 18.6	BYPASS 0.0	WAT2 80.6%	CIVV -25.0
PI 43.91 (6.368)	PI/PS 1.001	KTHETA 0.198	KRA2 0.179	BKRA2 0.653	KR2 0.351	KC2 0.319	KOSP 0.182
							D2 0.030

51(q) Time History Plots 170 Hz



PEAK AT TIME = 0.006492 SECONDS

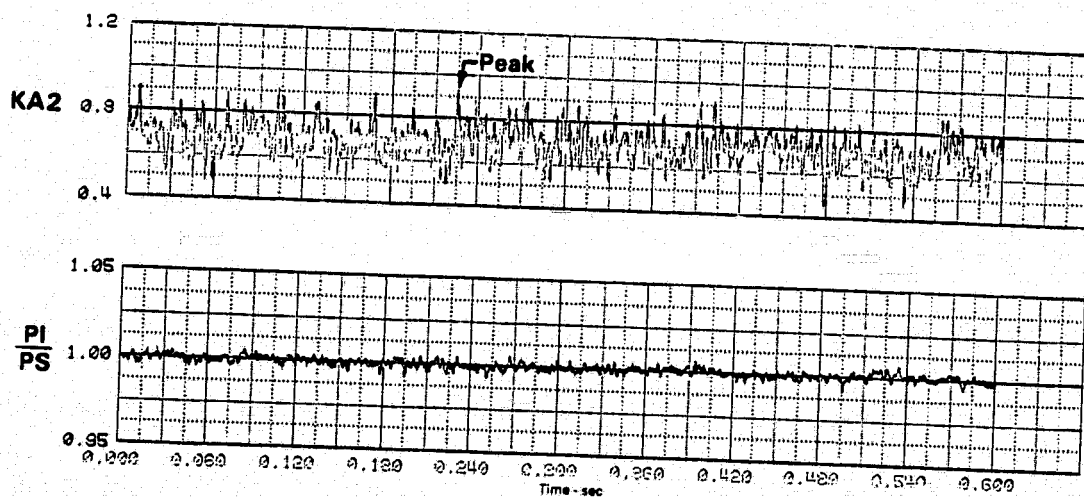
FIGURE G-51 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8, \alpha = -2.0, \beta = 0.0, WAT2 = 80.6\%$

FSE - NASA DATA STUDY

DATA PART/POINT 523 / 2 IDENT. 51
THE SEGMENT START TIME WAS AT 2:45:27.000

MACH 1.8	ALPHA -2	SETA 0	RHO -2.9	DELTA3 18.6	EXPASS 0.0	WAT2 80.6%	CIVV -25.0
DT 43.89 (6.366)	PI/PS 1.001	WAT1A 0.117	KP02 0.1150	EXP03 0.630	K02 0.127	K03 0.136	K002 0.272
							D2 0.110

51(r) Time History Plots 500 Hz



PEAK AT TIME = 0.224930 SECONDS

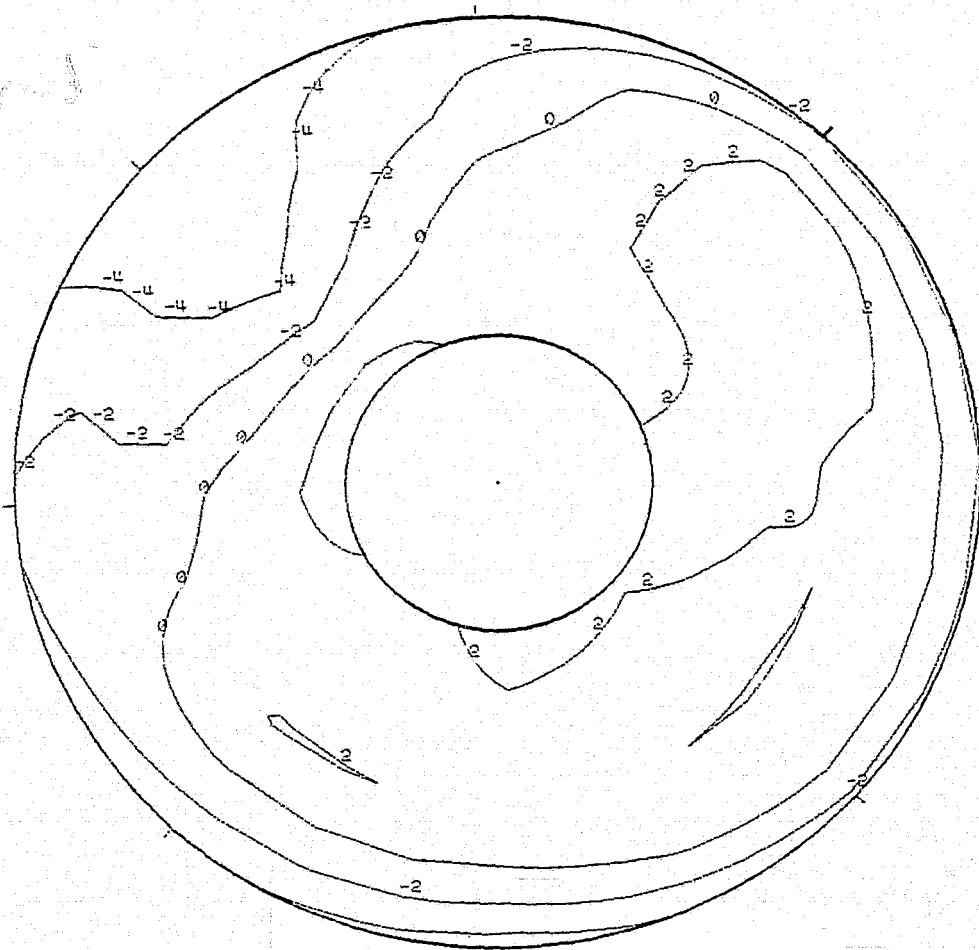
FIGURE G-51 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8, \alpha = -2.0, \beta = 0.0, WAT2 = 80.6\%$

FSE - NASA DATA STUDY

DATA PART/POINT 523 / 2 IDENT. 51
THE SEGMENT START TIME WAS AT 2:45:27.170

MACH 1.3	ALPHA -2	BETA 3	RHO -2.3	DELTA3 13.6	BYPASS 0.0	WAT2 80.6%	CIVV -25.0
PI 43.89 (6.365)	PI/PS 1.021	KTHETA 0.191	KPA2 0.187	BKPA2 1.522	KAP 0.772	KC2 0.220	KOSP 0.162
							D2 0.927

51(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 45 Hz



MEAN FACE PRESSURE = 43.89 kPa (6.365 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.486900 SECONDS

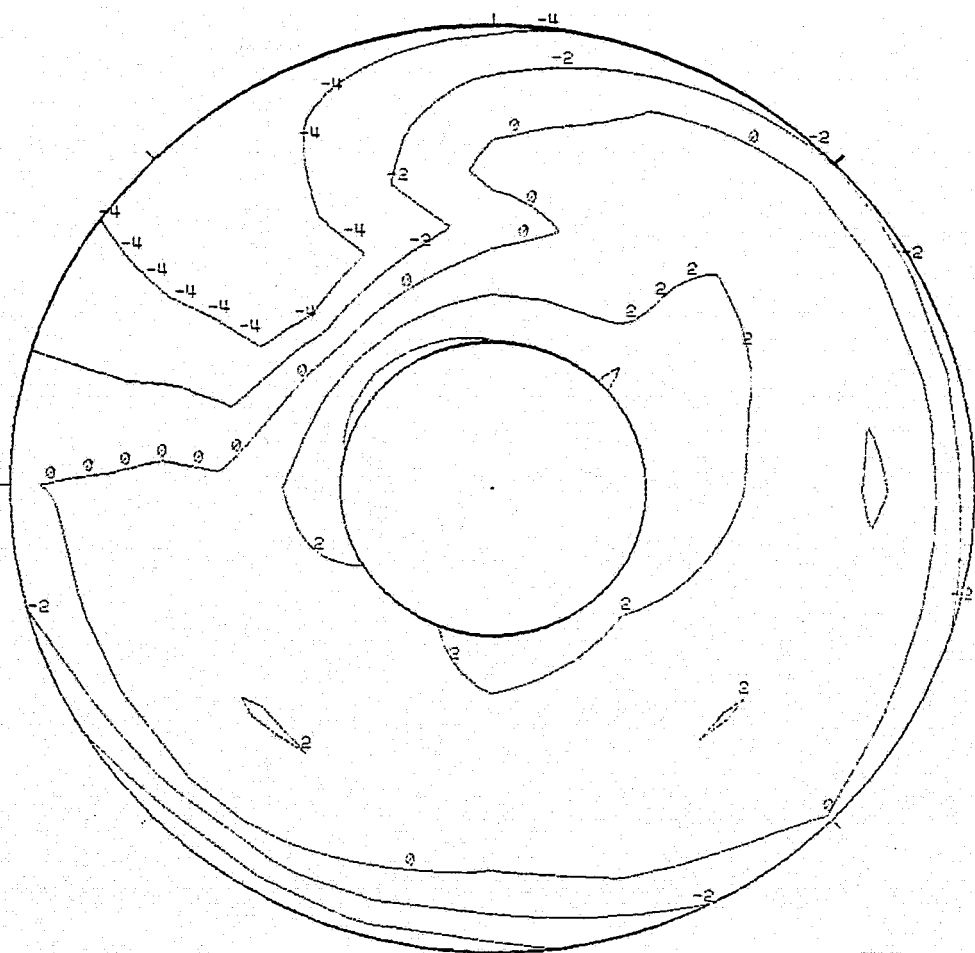
FIGURE G-51 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.6 %

FSE - NASA DATA STUDY

DATA PART/POINT 523 / 2 IDENT. 81
THE SEGMENT START TIME WAS AT 2:45:27.091

MACH 1.8	ALPHA -2	BETA 0	PHI -2.9	DELTA3 18.6	BYPASS 0.0	WAT2 80.6%	CIVV -25.0
PI 43.88 (6.364)	PI/PS 1.000	KTHETA 0.186	KRA2 0.174	BKRA2 0.524	KA2 0.320	KC2 0.305	KOSP 0.170
							D2 0.005

**51(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz**



MEAN FACE PRESSURE = 43.88 kPa (6.364 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.007574 SECONDS

FIGURE G-51 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.6\%$

FSE - NASA DATA STUDY

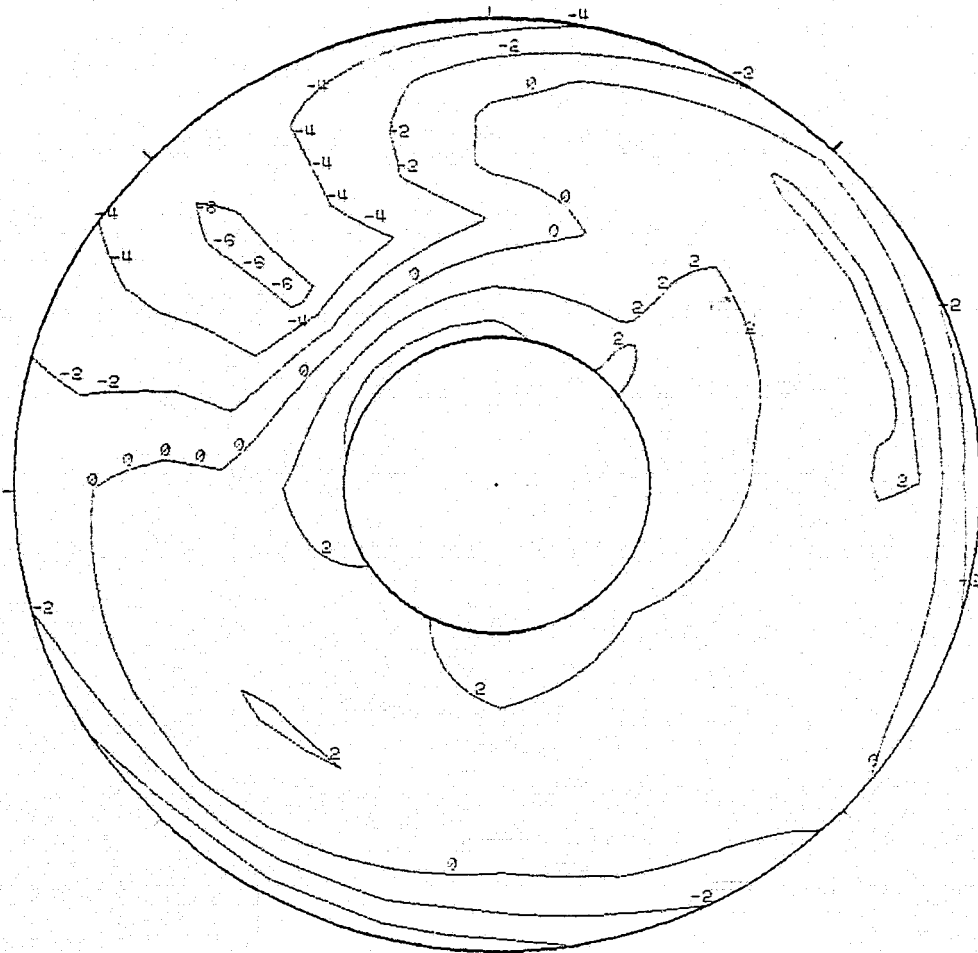
DATA PART/POINT 523 / 2 IDENT. 51
THE SEGMENT START TIME WAS AT 2:45:27.031

MACH 1.8	ALPHA -2	BETA 0	PHO -2.3	DELTA93 18.6	BYPASS 0.2	WAT2 80.6%	CIVV -25.3
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PI
43.91 (6.368)

PI/PS 1.001	KTHETA 0.198	KRA2 0.179	BKRA2 0.653	KQ2 0.351	KC2 0.319	KOSP 0.182	D2 0.030
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51(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 170 Hz



MEAN FACE PRESSURE = 43.91 kPa (6.368 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.006492 SECONDS

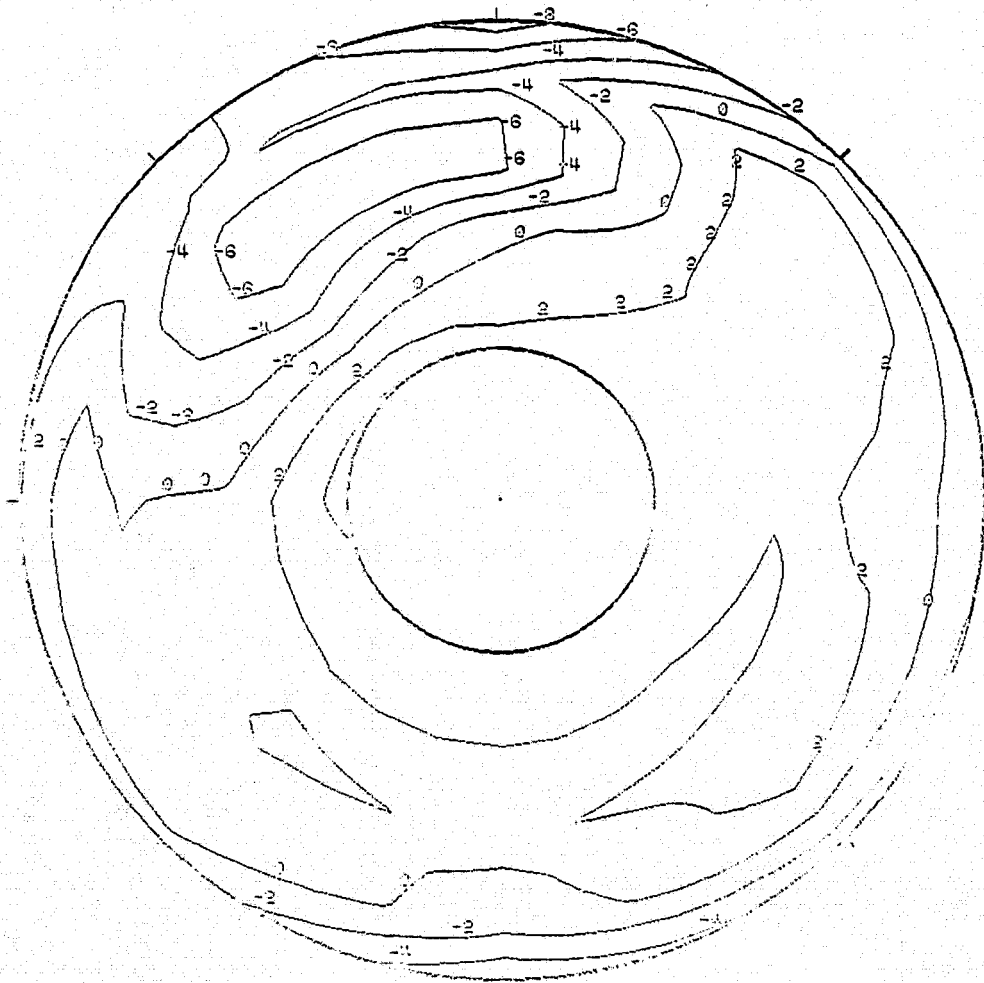
FIGURE G-51 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 80.6 %

FSE ~ NASA DATA STUDY

DATA PART/POINT 523 / 2 IDENT. 51
THE SEGMENT START TIME WAS AT 2:45:27.090

MACH 1.8	ALPHA -2	BETA 0	RHO -2.9	DELTA3 18.6	BYPASS 0.0	WAT2 80.6%	CIVV -25.0
PI 43.89 (6.366)	PI/PS 1.001	KTHETA 0.237	KRA2 0.130	SKRA2 0.690	KA2 0.327	KC2 0.366	KOSP 0.232
							D2 0.110

51(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 500 Hz



MEAN FACE PRESSURE = 43.89 kPa (6.366 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.224930 SECONDS

FIGURE G-51 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 80.6\%$

FSE - NASA Data Study
 Part/Point - 525/4, Ident 52
 RHO DELTA3 BYPASS CIVV
 -2.9 18.6 0.0 -25.00

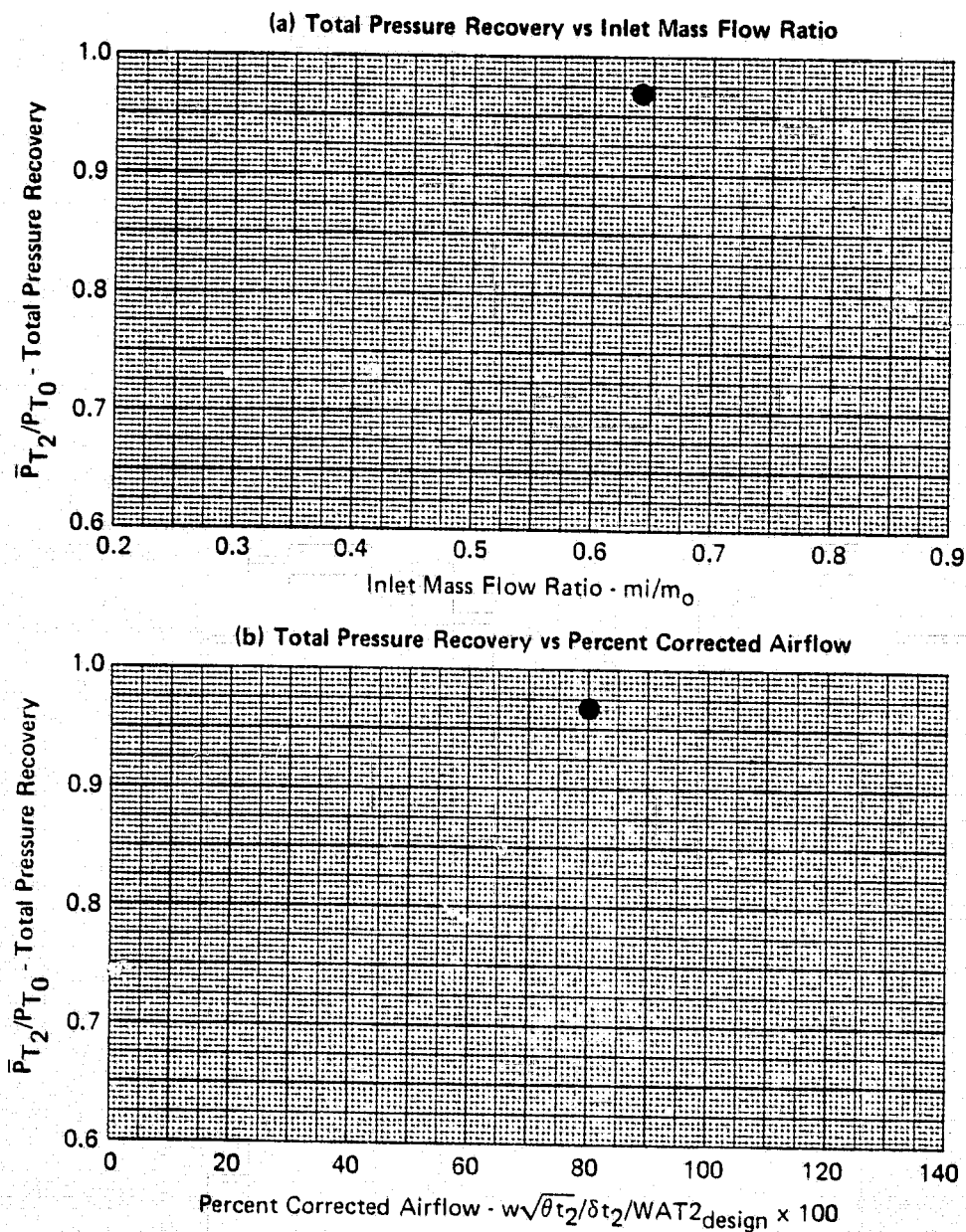
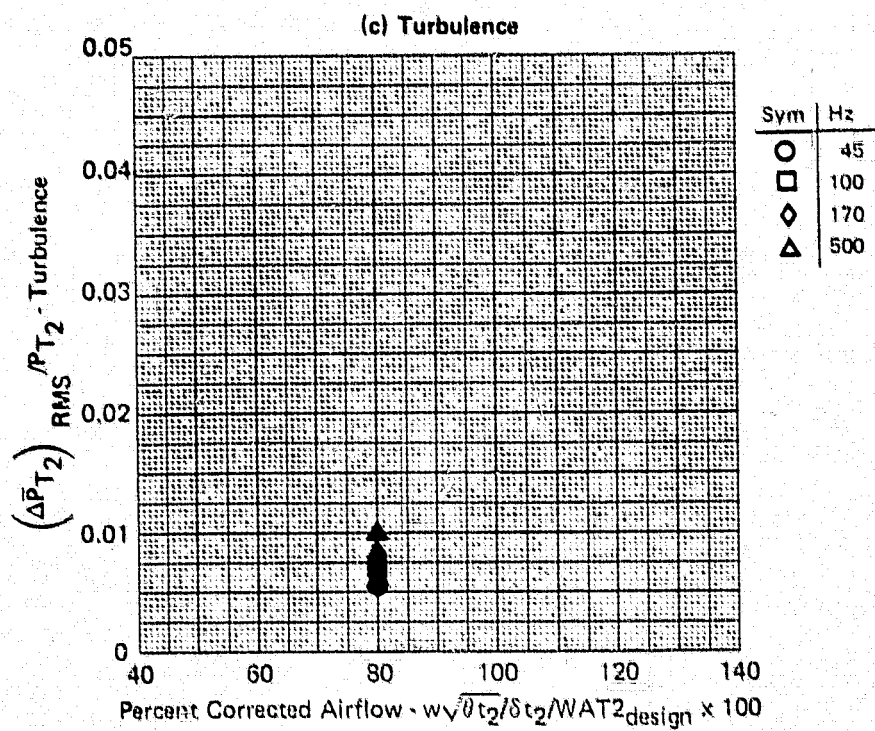


FIGURE G-52
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 79.8\%$

GP77-0658-1

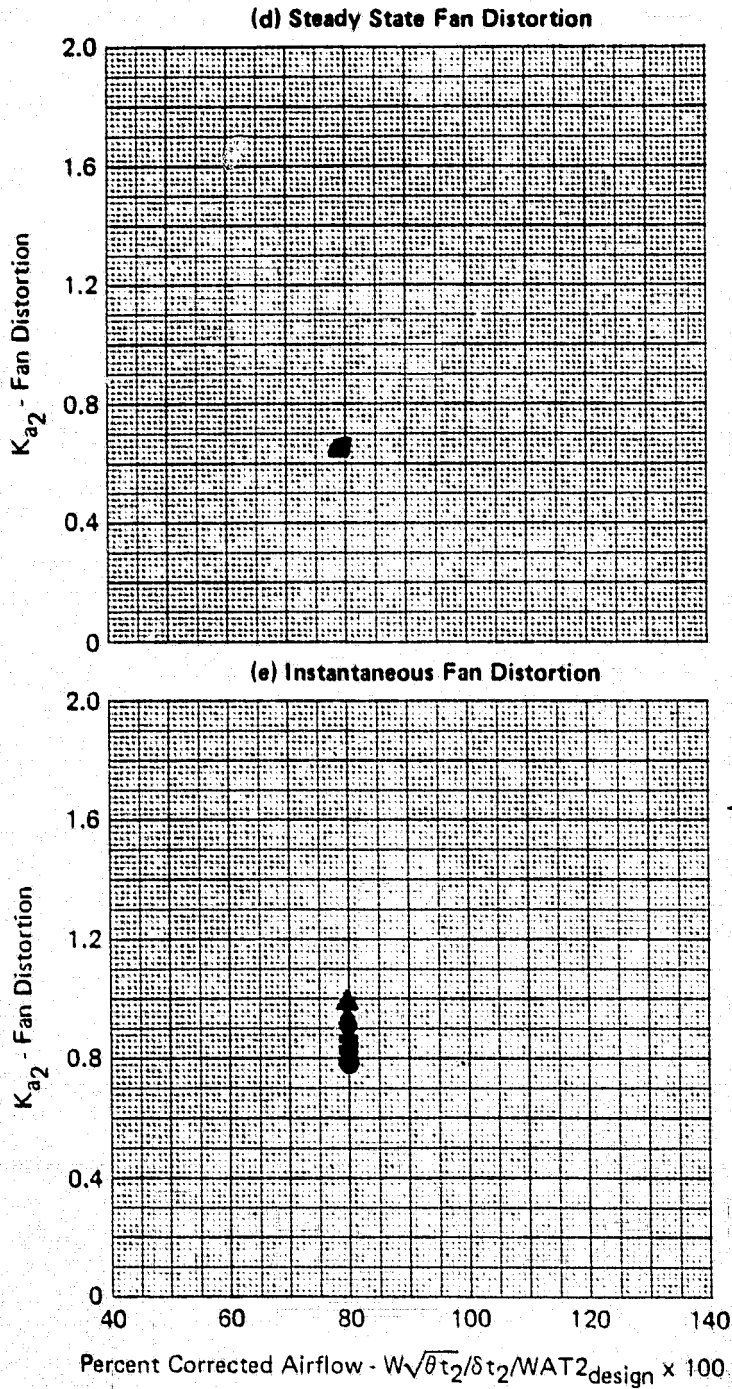
FSE - NASA Data Study
 Part/Point - 525/4, Ident 52
 RHO DELTA3 BYPASS CIVV
 -2.9 18.6 0.0 -25.00



QP77-0858-5

FIGURE G-52 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 79.8\%$

FSE - NASA Data Study
 Part/Point - 525/4, Ident 52
 RHO DELTA3 BYPASS CIVV
 -2.9 18.6 0.0 -25.00



GP77-0658-J

FIGURE G-52 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 79.8\%$

FSE - NASA Data Study
 Part/Point - 525/4, Ident 52
 RHO DELTA3 BYPASS CIVV
 -2.9 18.6 0.0 -25.00

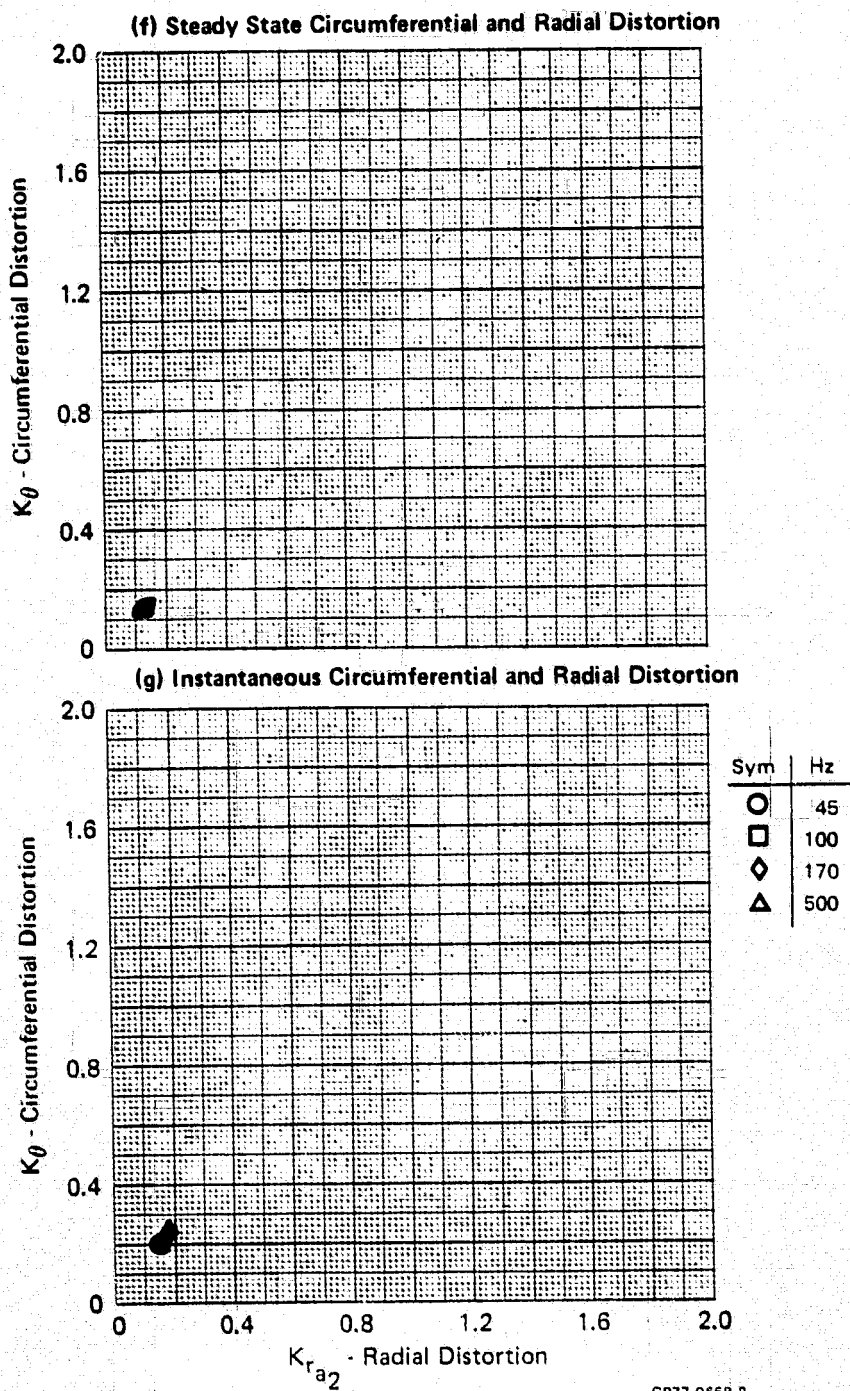
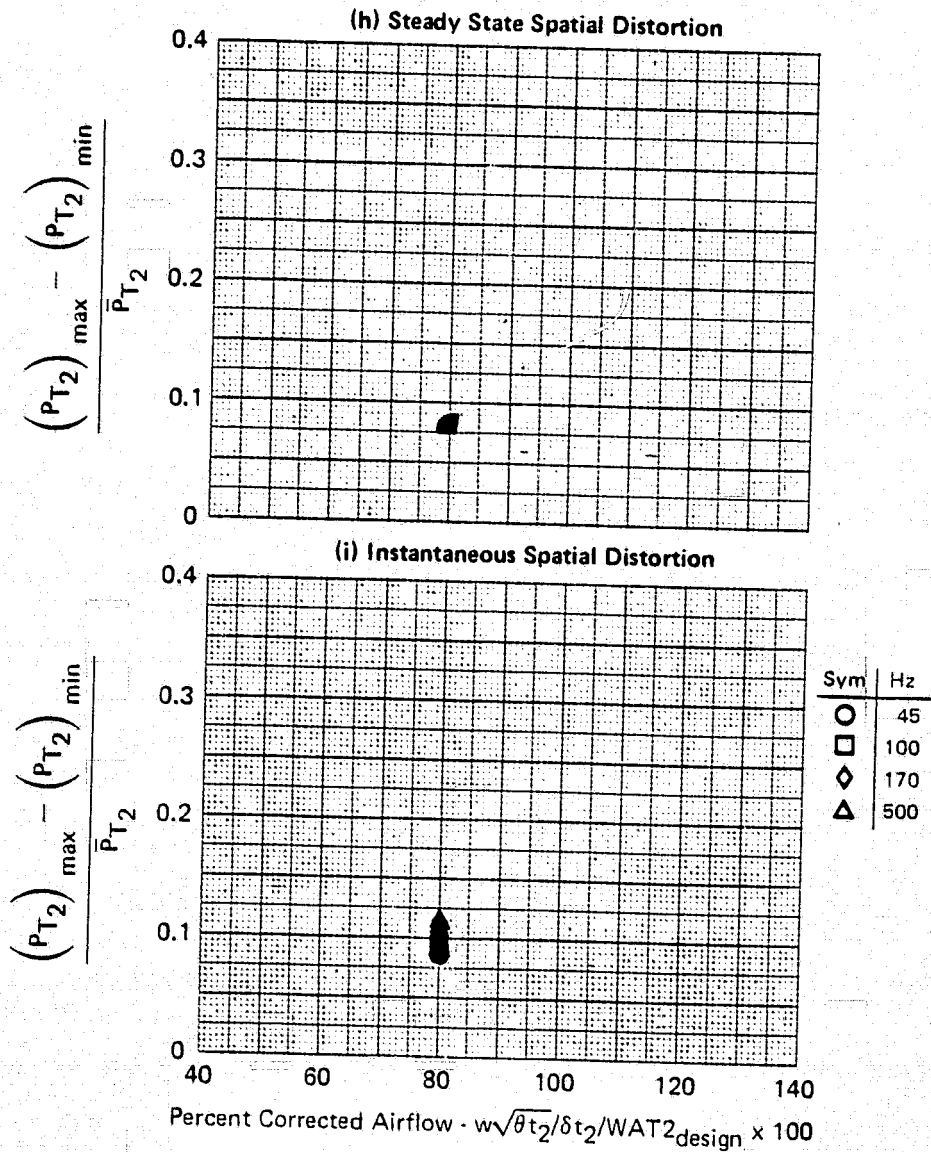


FIGURE G-52 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 79.8 %

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FSE - NASA Data Study
 Part/Point - 525/4, Ident 52
 RHO DELTA3 BYPASS CIVV
 -2.9 18.6 0.0 -25.00



GP77-0658-4

FIGURE G-52 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8, \alpha = -2.0, \beta = 0.0, WAT2 = 79.8 \%$

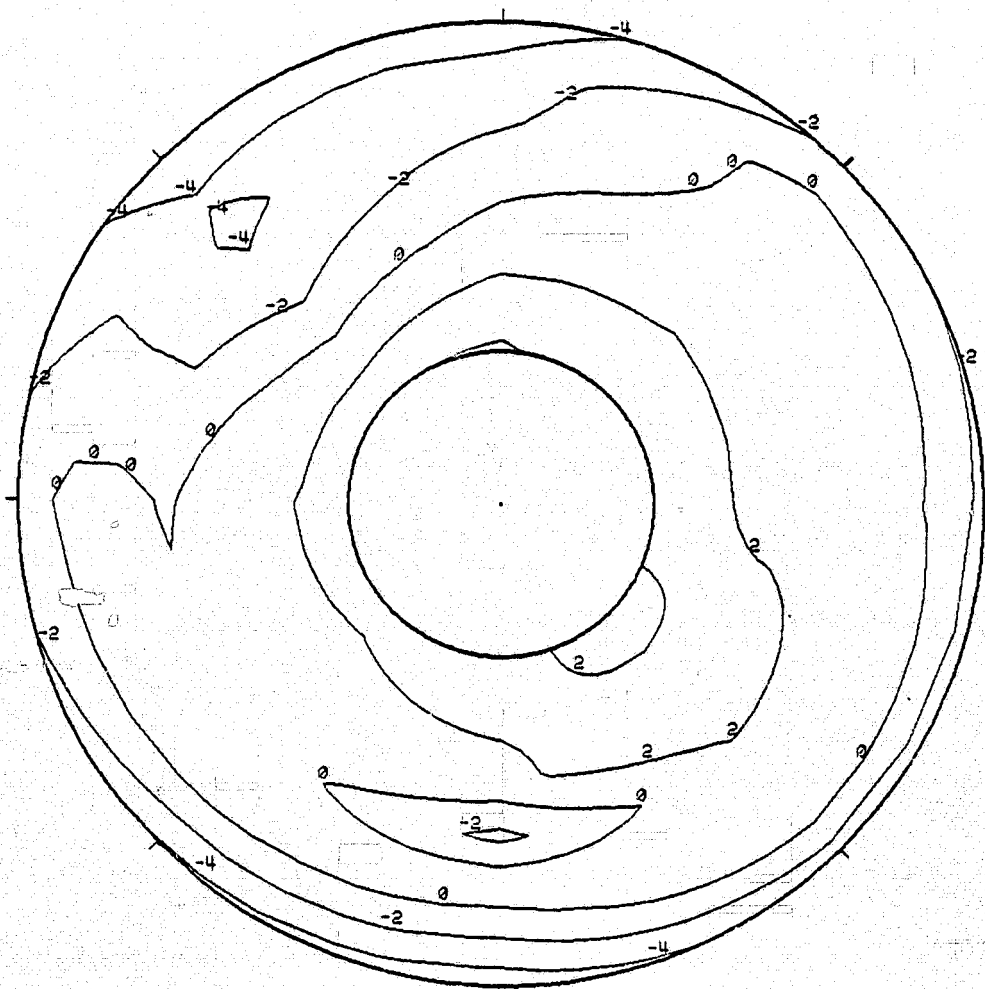
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FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. 52
THE SEGMENT START TIME WAS AT 3:18:26.171

MACH 1.8	ALPHA -2	BETA 0	RHO -2.9	DELTA3 18.6	BYPASS 0.0	WAT2 79.8%	CIVV -25.0
PI 44.31 (6.427)	PI/PS 1.000	KTHETA 0.135	KRA2 0.130	BKRA2 0.515	KA2 0.650	KC2 0.104	KESP 0.103
							D2 0.001

52 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 44.31 kPa (6.427 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-52 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 79.8\%$

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FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. 52
THE SEGMENT START TIME WAS AT 3:18:26.171

MACH
1.8

ALPHA
-2

BETA
0

RHO
-2.9

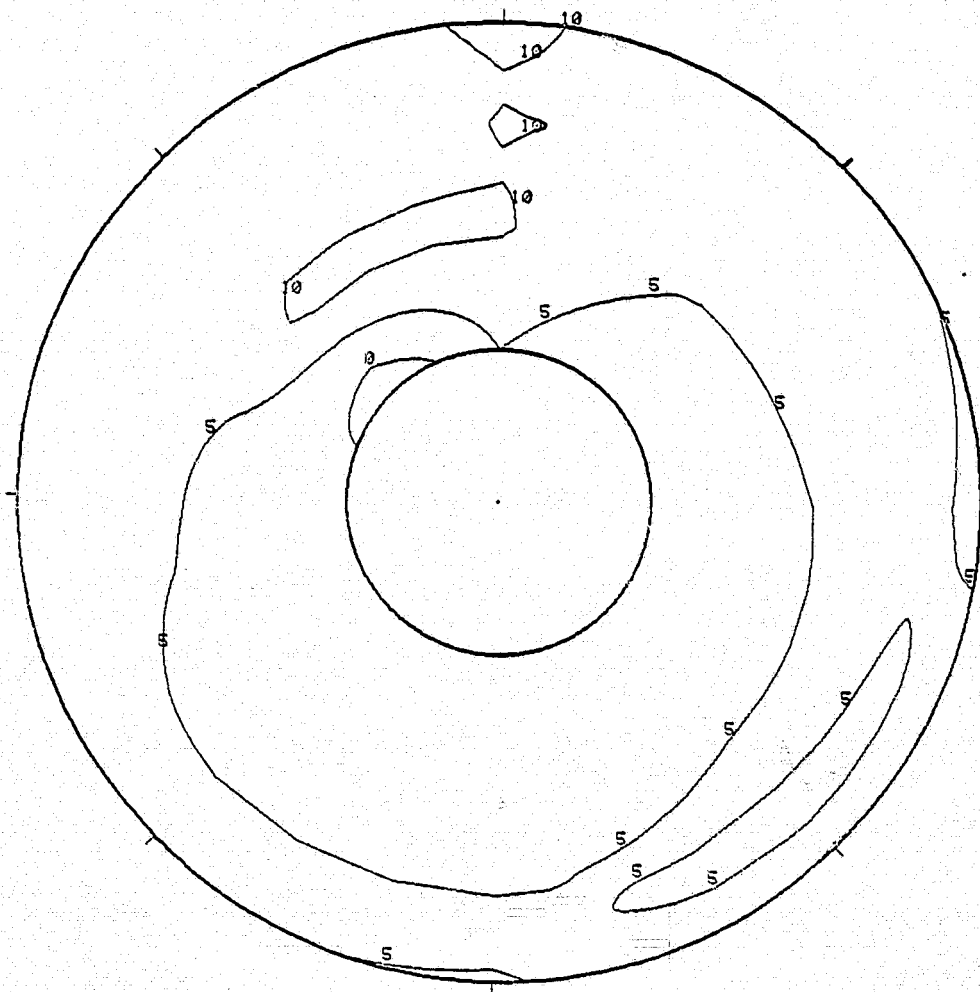
DELTA3
18.6

BYPASS
0.0

WAT2
79.8%

CIVV
-25.0

52(k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00565

FIGURE G-52 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

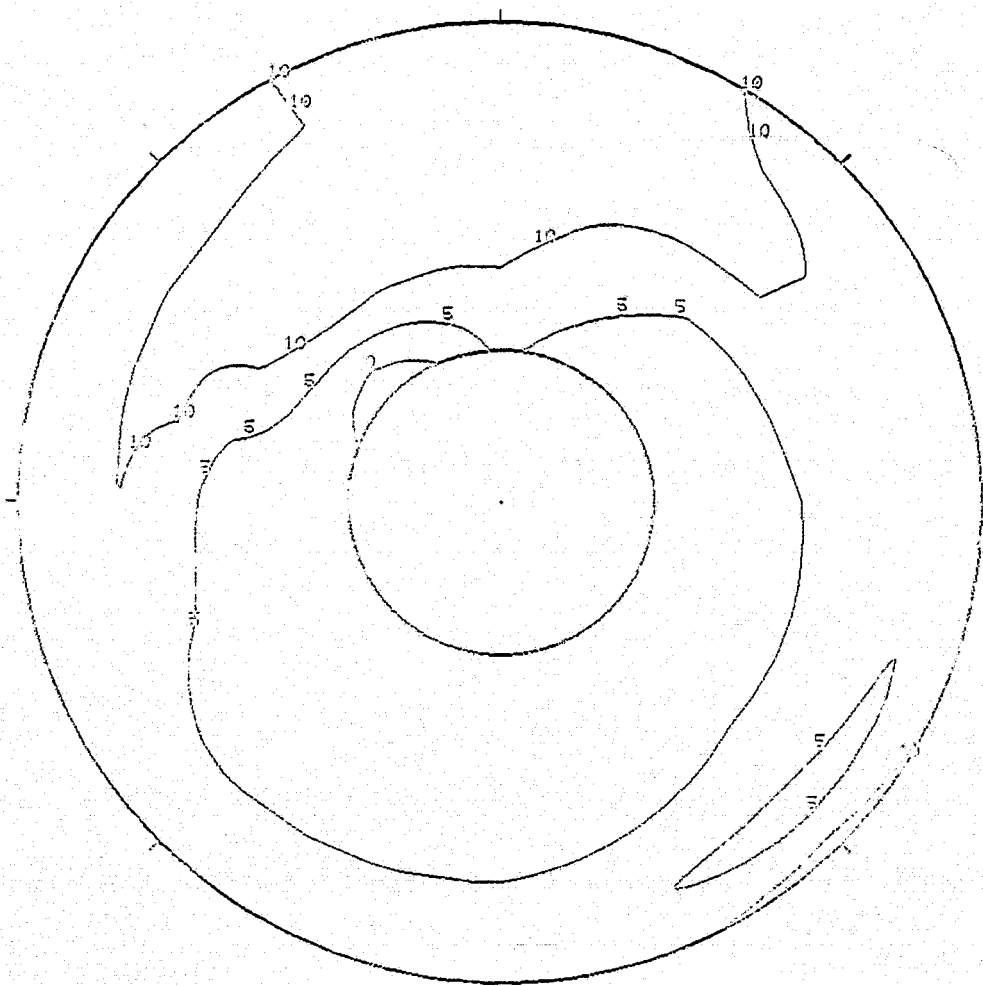
$M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 79.8 %

FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. **52**
THE SEGMENT START TIME WAS AT 3:18:26.170

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
1.8	-2	0	-2.9	18.6	0.0	79.8%	-25.0

52 (I) Turbulence Contour 100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00693

FIGURE G-52 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 79.8 %

FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. 52
THE SEGMENT START TIME WAS AT 3:18:26.170

MACH
1.8

ALPHA
-2

BETA
0

RHO
-2.9

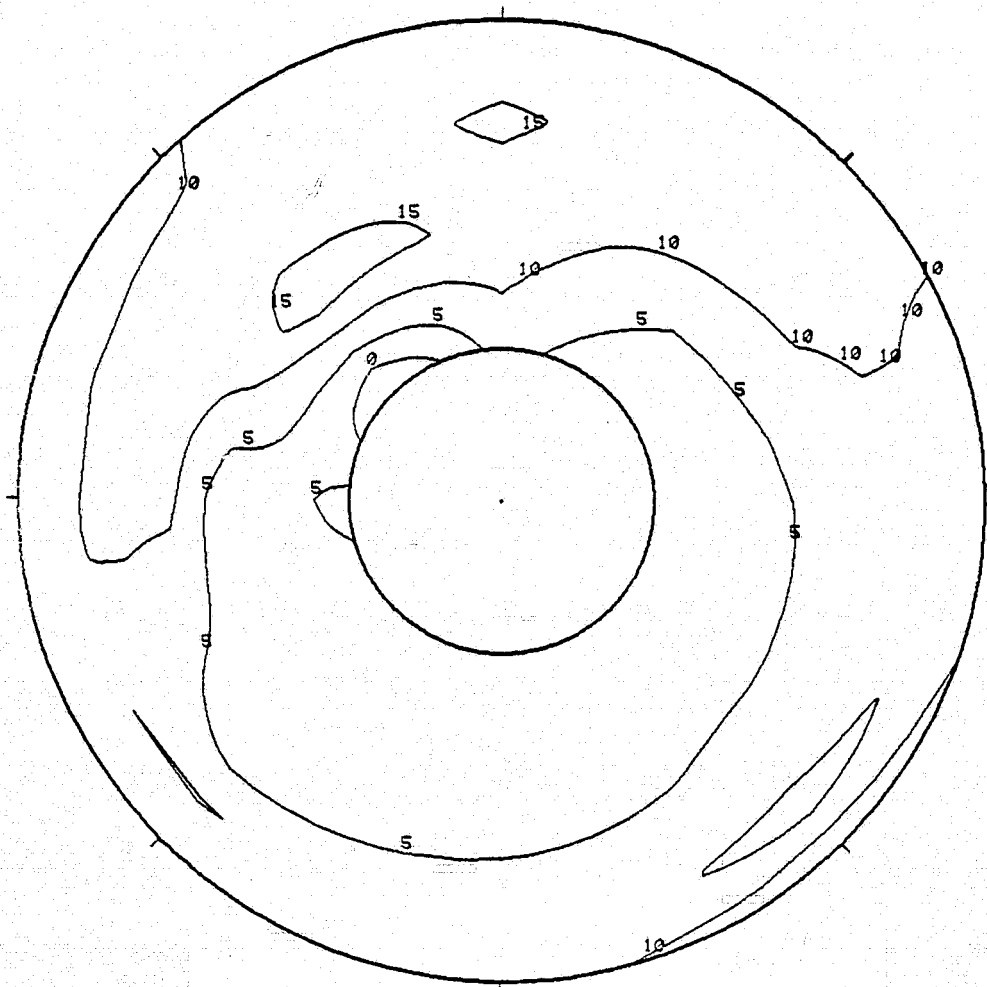
DELTA3
18.6

BYPASS
0.0

WAT2
79.8%

CIVV
-25.0

52(m) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00809

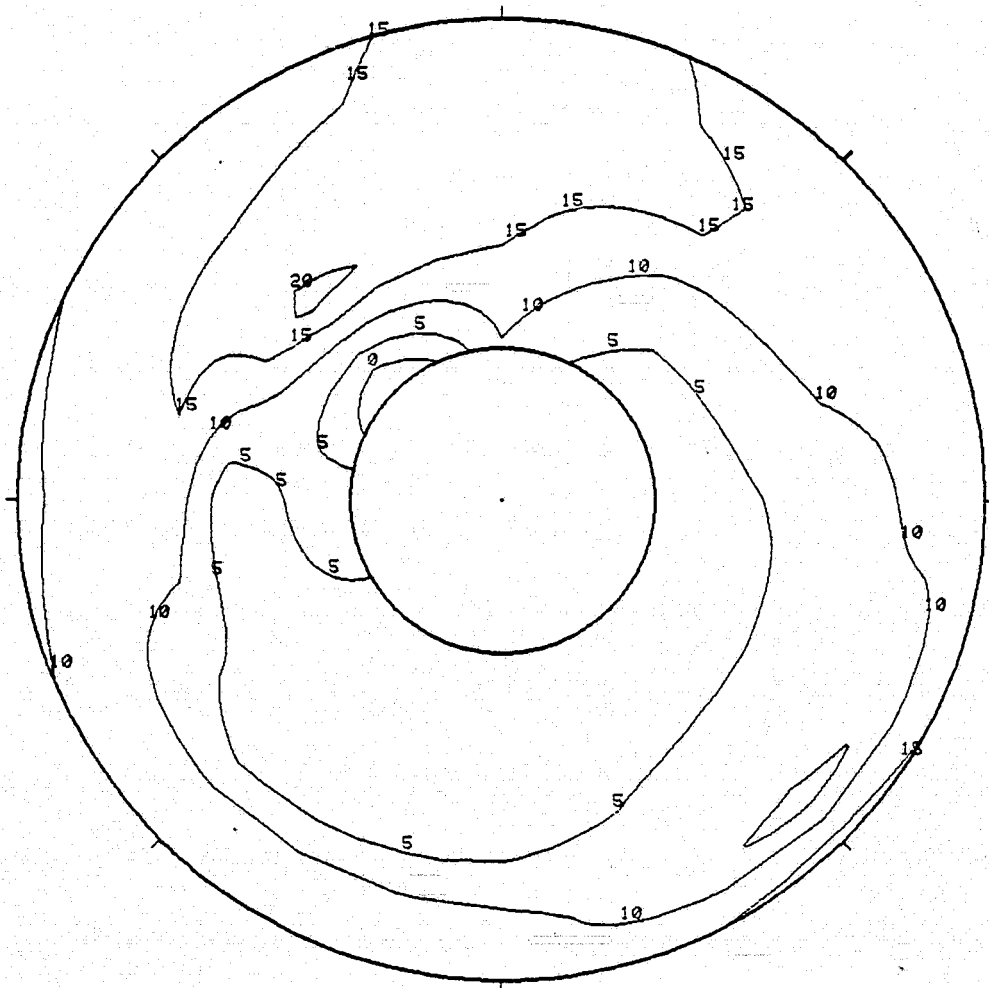
FIGURE G-52 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 79.8 %

FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. 52
THE SEGMENT START TIME WAS AT 3:18:26.170

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
1.8	-2	0	-2.9	18.6	0.0	79.8%	-25.0

52(n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00987

FIGURE G-52 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

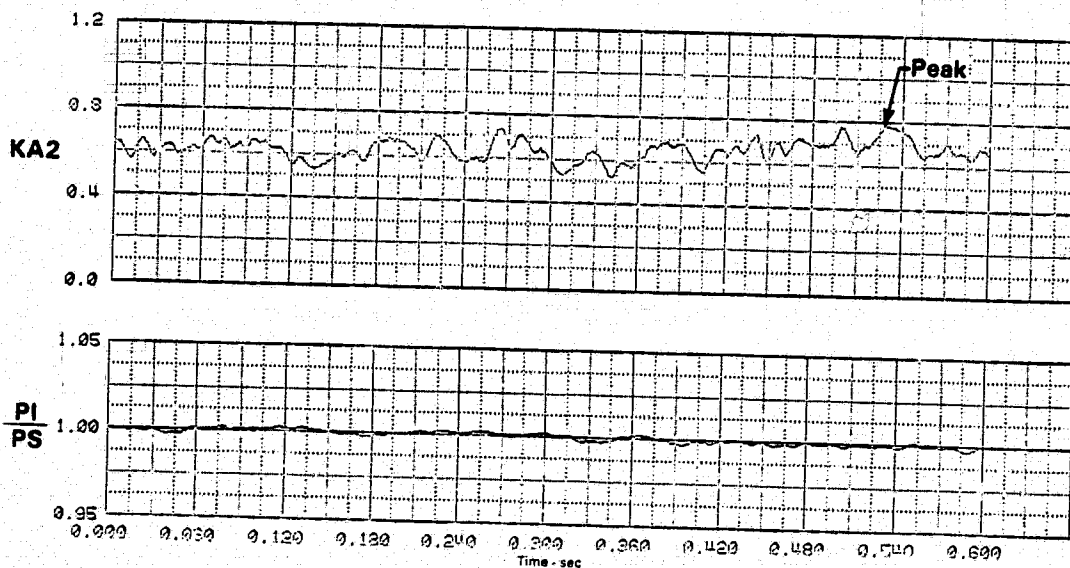
$M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 79.8\%$

FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. 52
THE SEGMENT START TIME WAS AT 3:10:20.171

MACH 1.8	ALPHA -2	BETA 0	RHO -2.9	DELTA2 13.5	BYPASS 0.0	WAT2 79.8%	CIVV -25.0
PI 44.28 (6.422)	P1/PS 0.933	KTHETA 0.233	KRQ2 2.147	2KPS2 0.503	KQ2 0.783	KQ2 0.239	KQSP 0.216
							D2 0.089

52(o) Time History Plots 45 Hz



PEAK AT TIME = 0.528016 SECONDS

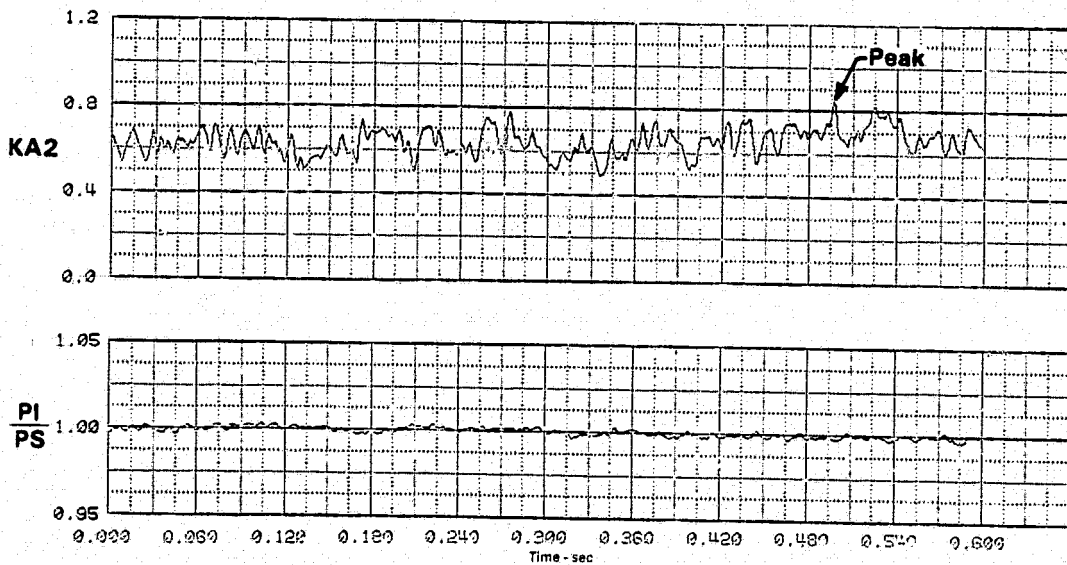
FIGURE G-52 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 79.8\%$

FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. 52
THE SEGMENT START TIME WAS AT 3:18:26.170

MACH 1.8	ALPHA -2	BETA 0	RHO -2.9	DELTA3 18.6	BYPASS 0.0	WAT2 79.8%	CIVV -25.0
PI 44.24 (6.416)	PI/PS 0.999	KTHETA 0.207	KRA2 0.162	EKRA2 0.633	KQ2 0.246	KC2 0.251	KOSP 0.168
							D2 0.029

52(p) Time History Plots 100 Hz



PEAK AT TIME = 0.496633 SECONDS

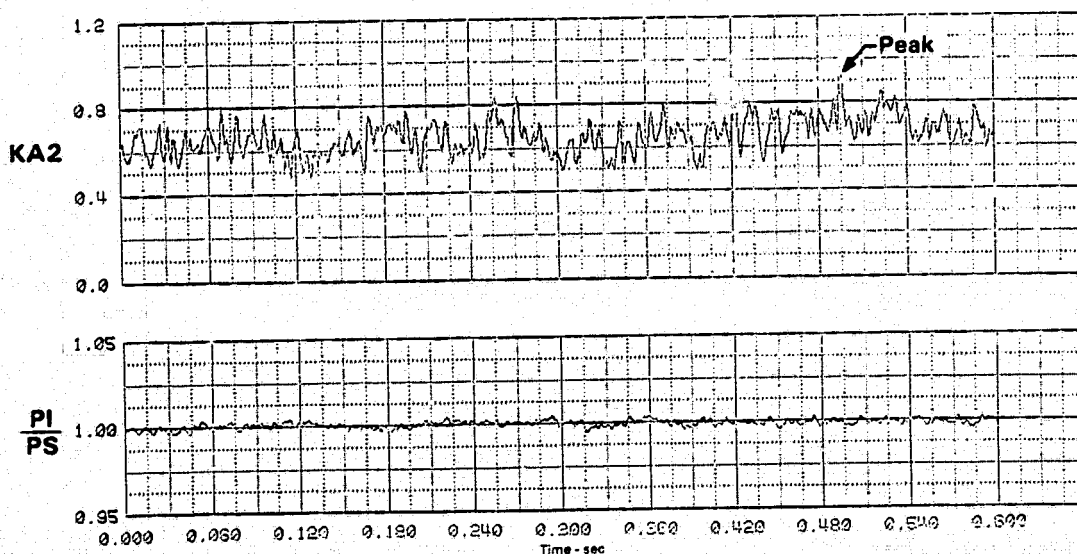
FIGURE G-52 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8, \alpha = -2.0, \beta = 0.0, WAT2 = 79.8\%$

FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. 52
THE SEGMENT START TIME WAS AT 3:18:26.170

MACH 1.8	ALPHA -2	BETA 0	RHO -2.9	DELTA3 18.6	BYPASS 0.0	WAT2 79.8%	CIVV -25.0
P1 44.16 (6.405)	PI/PS 0.997	KTHETA 0.228	KRA2 0.174	BKRA2 0.689	KR2 0.917	KC2 0.277	KOSP 0.193
							D2 0.106

52(q) Time History Plots 170 Hz



PEAK AT TIME = 0.495556 SECONDS

FIGURE G-52 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8, \alpha = -2.0, \beta = 0.0, WAT2 = 79.8\%$

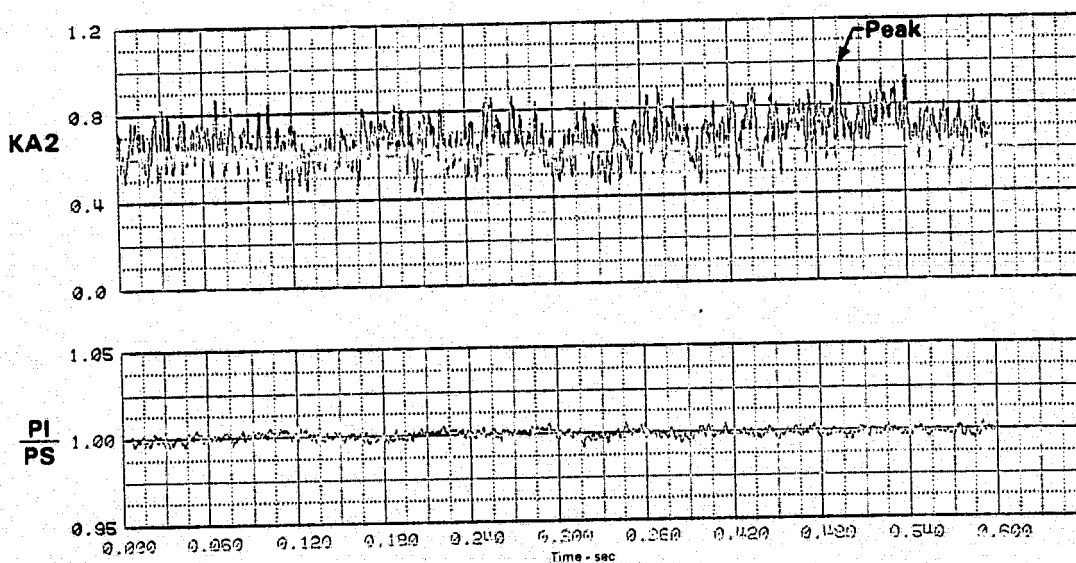
FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. 52
THE SEGMENT START TIME WAS AT 3:18:26.170

MACH 1.8 ALPHA -2 BETA 0 RHO -2.9 DELTA3 18.6 BYPASS 0.0 WAT2 79.8% CIVV -25.0

P1 4.22 (6.414) P1/PS 0.998 KTHETA 0.256 KRA2 0.186 BKRA2 0.735 KA2 0.992 KC2 0.239 KOSP 0.210 D2 0.113

52(r) Time History Plots 500 Hz



PEAK AT TIME = 0.495656 SECONDS

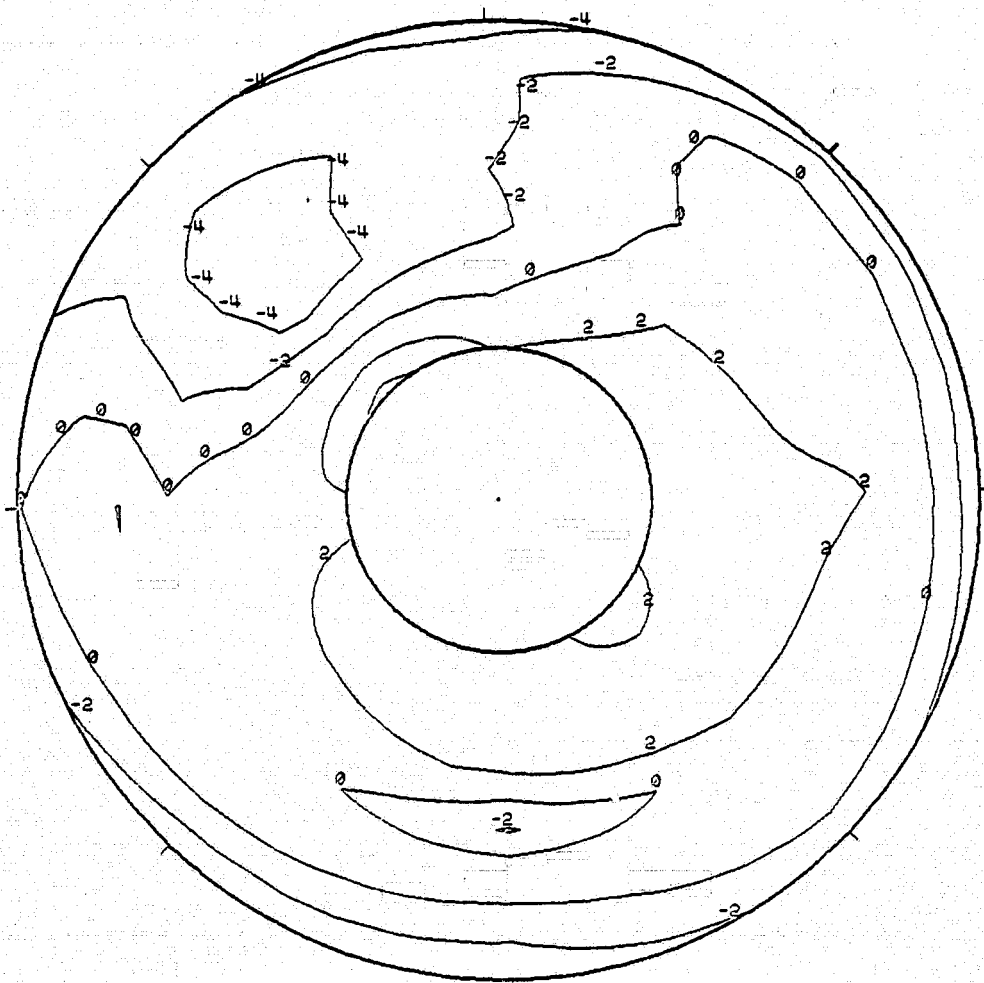
FIGURE G-52 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 79.8\%$

FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. 52
THE SEGMENT START TIME WAS AT 3:18:26.171

MACH 1.8	ALPHA -2	BETA 0	RHO -2.3	DELTA3 18.6	BYPASS 0.0	WAT2 79.8%	CIVV -25.0
P1 44.28 (6.422)	P1/PS 0.993	KTHETA 0.203	KRA2 0.147	BKRA2 0.583	KR2 0.785	KC2 0.289	KOSP 0.216
							D2 0.089

**52(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz**



MEAN FACE PRESSURE = 44.28 kPa (6.422 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.528016 SECONDS

FIGURE G-52 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 79.8\%$

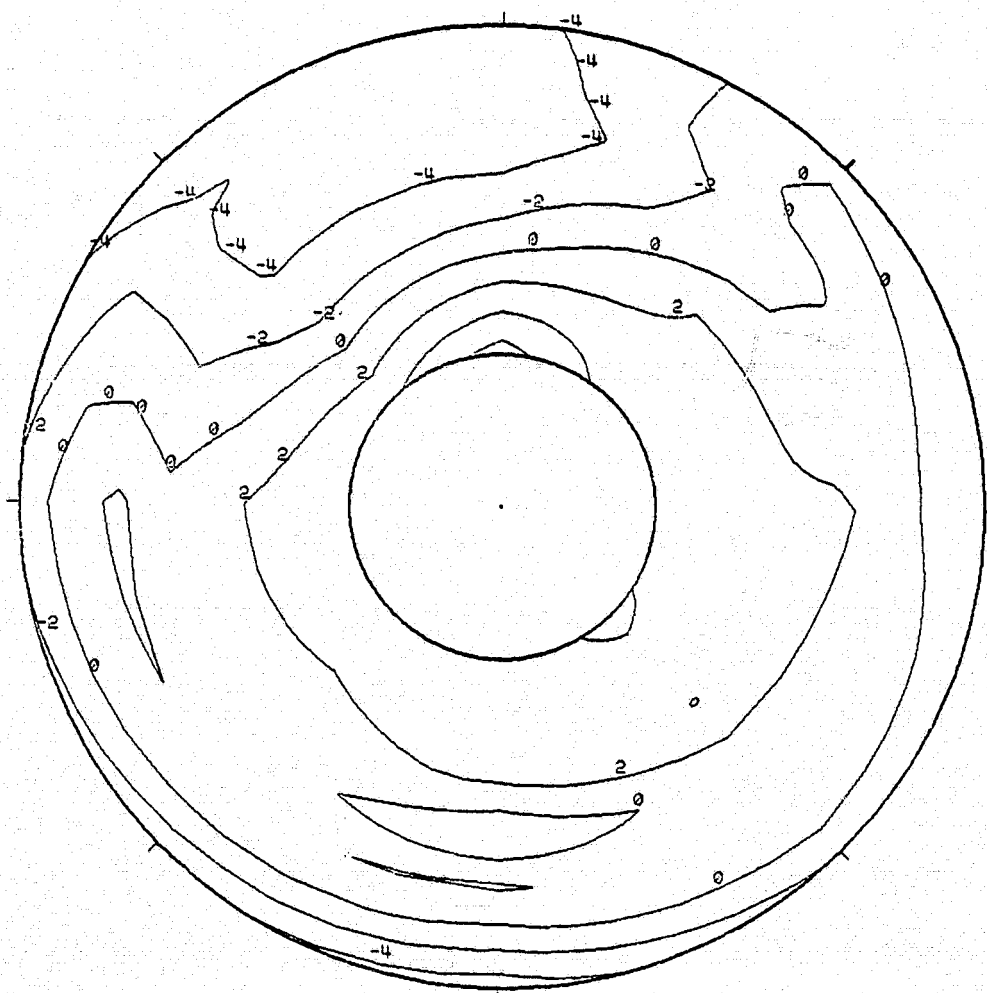
FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. 52
THE SEGMENT START TIME WAS AT 3:18:26.170

MACH 1.8	ALPHA -2	BETA 0	RHO -2.9	DELTA3 18.6	BYPASS 0.0	WAT2 79.8%	CIVV -25.0
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PI 44.24 (6.416)	PI/PS 0.993	KTHETA 0.207	KRA2 0.162	BKRA2 0.638	KA2 0.846	KC2 0.251	KOSP 0.168	D2 0.099
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52(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz



MEAN FACE PRESSURE = 44.24 kPa (6.416 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.496638 SECONDS

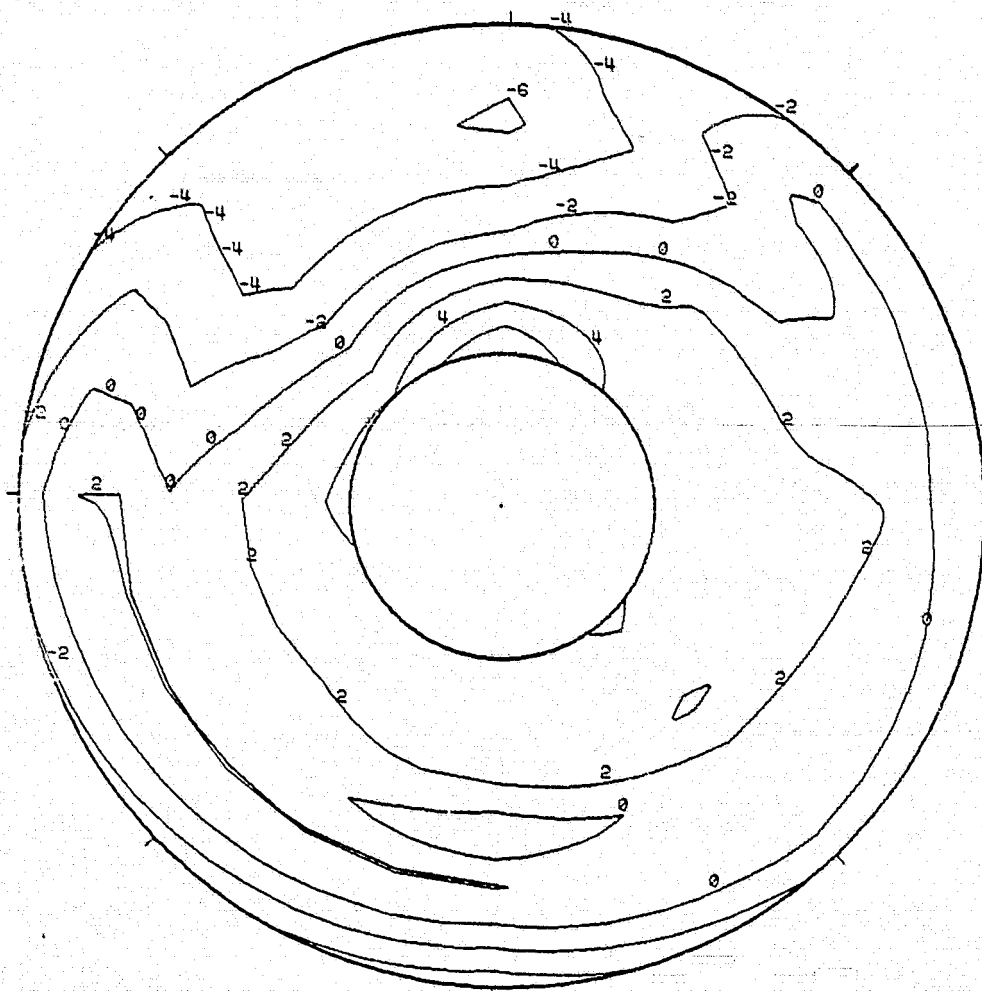
FIGURE G-52 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 79.8 %

FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. 52
THE SEGMENT START TIME WAS AT 3:18:26.170

MACH 1.8	ALPHA -2	BETA 0	RHO -2.9	DELTA3 18.6	BYPASS 0.0	WAT2 79.8%	CIVV -25.0
P1 44.16 (6.405)	P1/PS 0.997	KTHETA 0.229	KRA2 0.174	BKRA2 0.689	KA2 0.917	KC2 0.277	KOSP 0.193
							D2 0.106

52(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 44.16 kPa (6.405 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.495556 SECONDS

FIGURE G-52 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 79.8 %

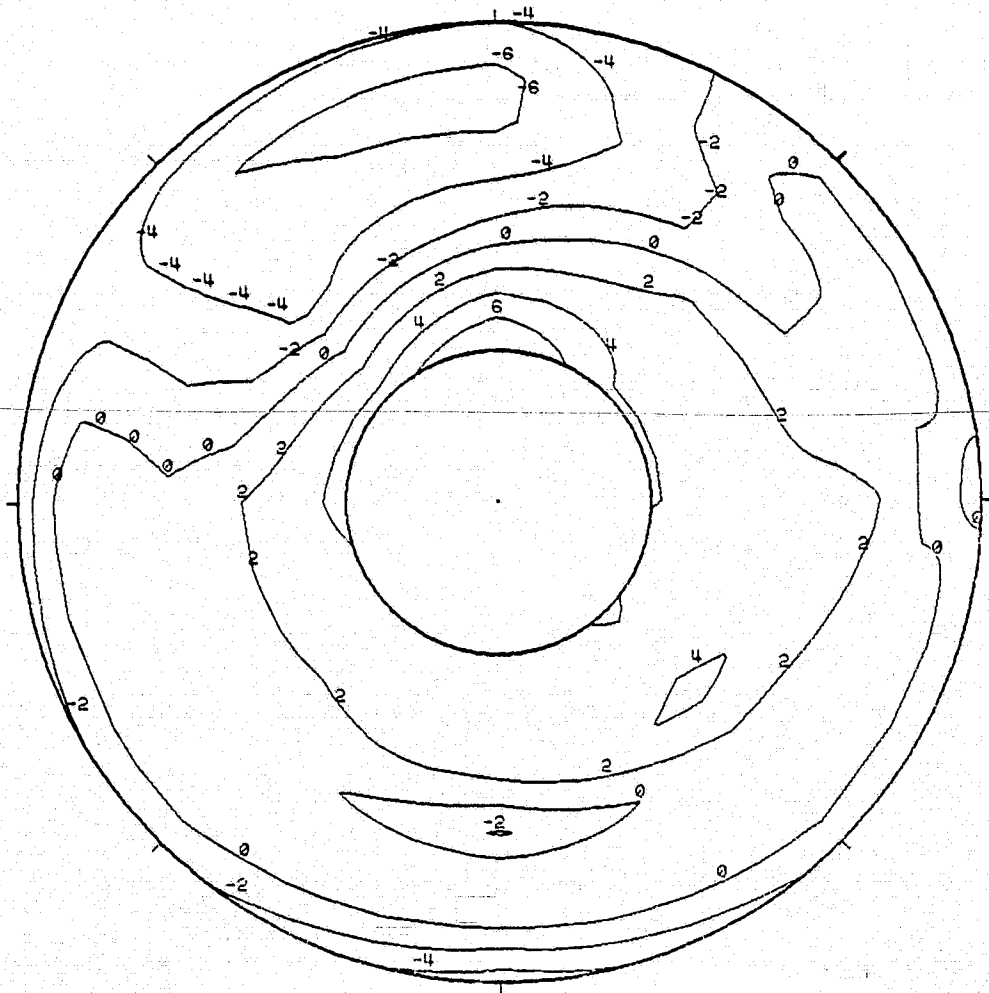
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FSE - NASA DATA STUDY

DATA PART/POINT 525 / 4 IDENT. 82
THE SEGMENT START TIME WAS AT 3:18:26.170

MACH 1.8	ALPHA -2	BETA 0	RHO -2.9	DELTA3 18.6	BYPASS 0.0	WAT2 79.8%	CIVV -25.0
PI 44.22 (6.414)	PI/PS 0.998	KTHETA 0.256	KRA2 0.186	BKRA2 0.735	KR2 0.992	KC2 0.239	KOSP 0.210
							D2 0.113

52(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 500 Hz



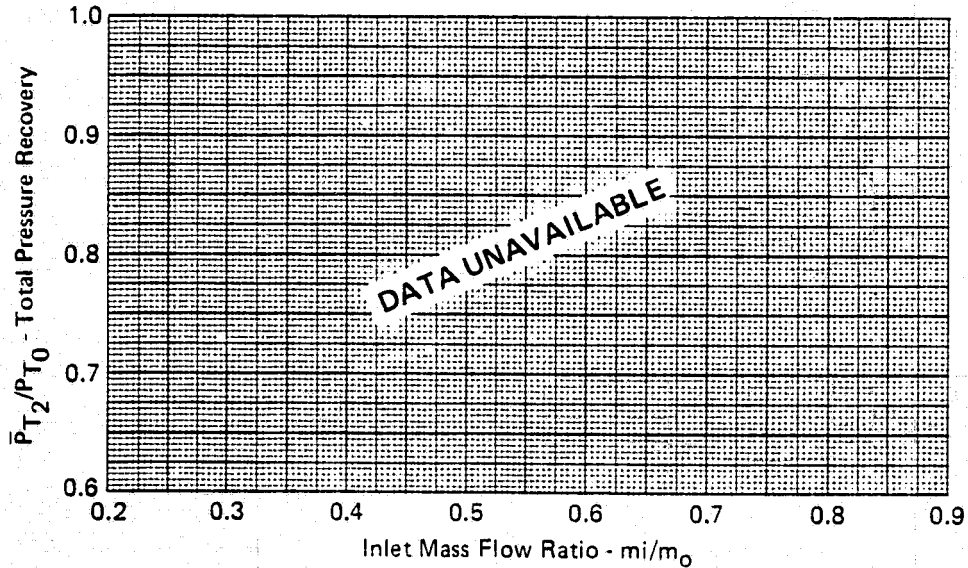
MEAN FACE PRESSURE = 44.22 kPa (6.414 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.495656 SECONDS

FIGURE G-52 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 79.8 %

FLIGHT - NASA Data Study
Part/Point - 416/1, Ident 53

RHO	DELTA3	BYPASS	CIVV
-2.9	18.2	0.0	-25.00

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



(b) Total Pressure Recovery vs Percent Corrected Airflow

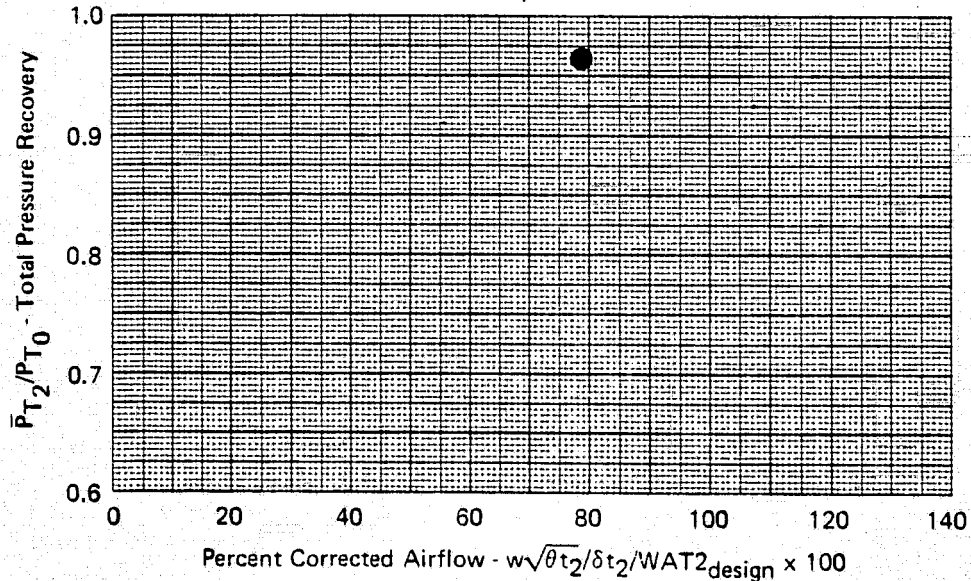
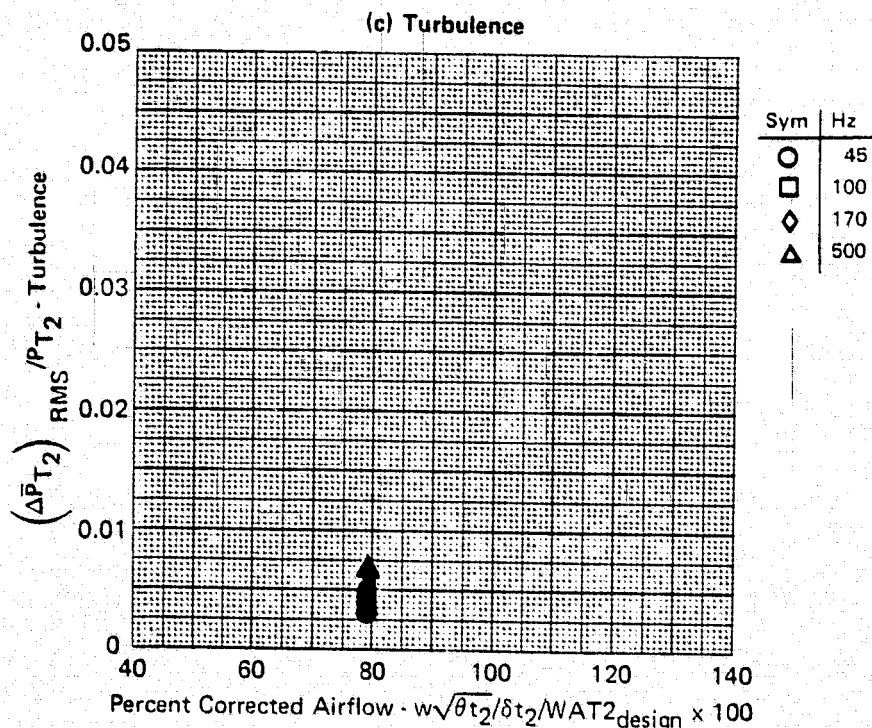


FIGURE G-53
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.81, \alpha = -2.3, \beta = 0.2, WAT2 = 78.9\%$

GP77-0658-1

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FLIGHT - NASA Data Study
 Part/Point - 416/1, Ident 53
 RHO DELTA3 BYPASS CIVV
 -2.9 18.2 0.0 -25.00



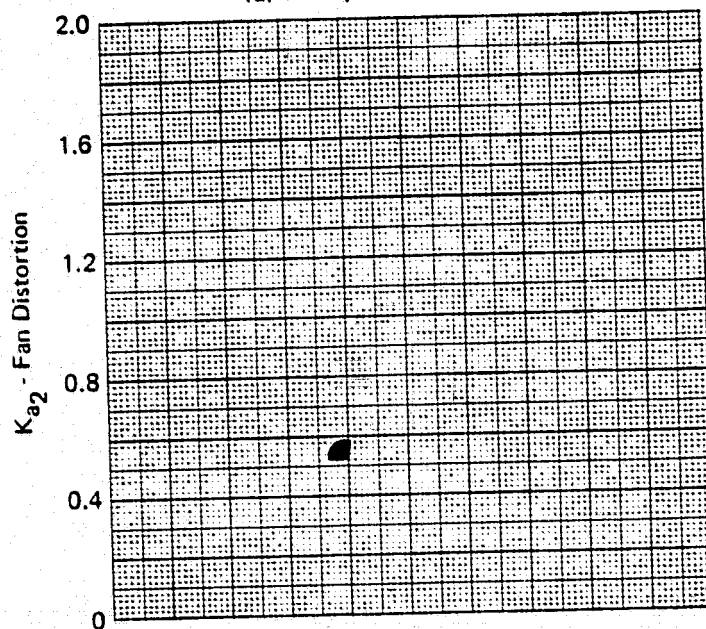
GP77-0658-5

FIGURE G-53 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, $WAT2 = 78.9\%$

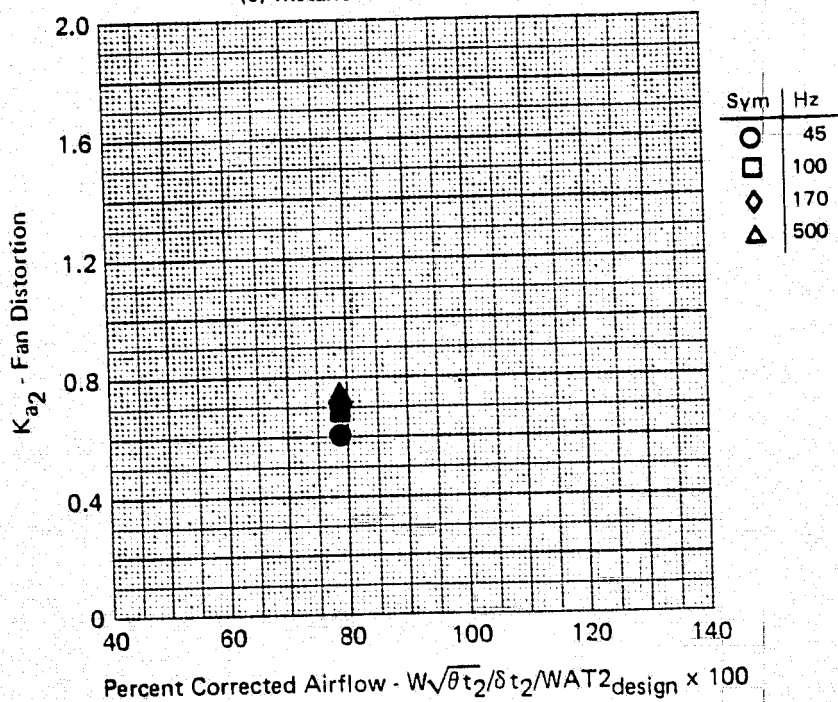
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FLIGHT - NASA Data Study
 Part/Point - 416/1, Ident 53
 RHO DELTA3 BYPASS CIVV
 -2.9 18.2 0.0 -25.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion



GP77-0658-3

FIGURE G-53 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, $WAT2 = 78.9\%$

FLIGHT - NASA Data Study
 Part/Point - 416/1, Ident 53
 RHO DELTA3 BYPASS CIVV
 -2.9 18.2 0.0 -25.00

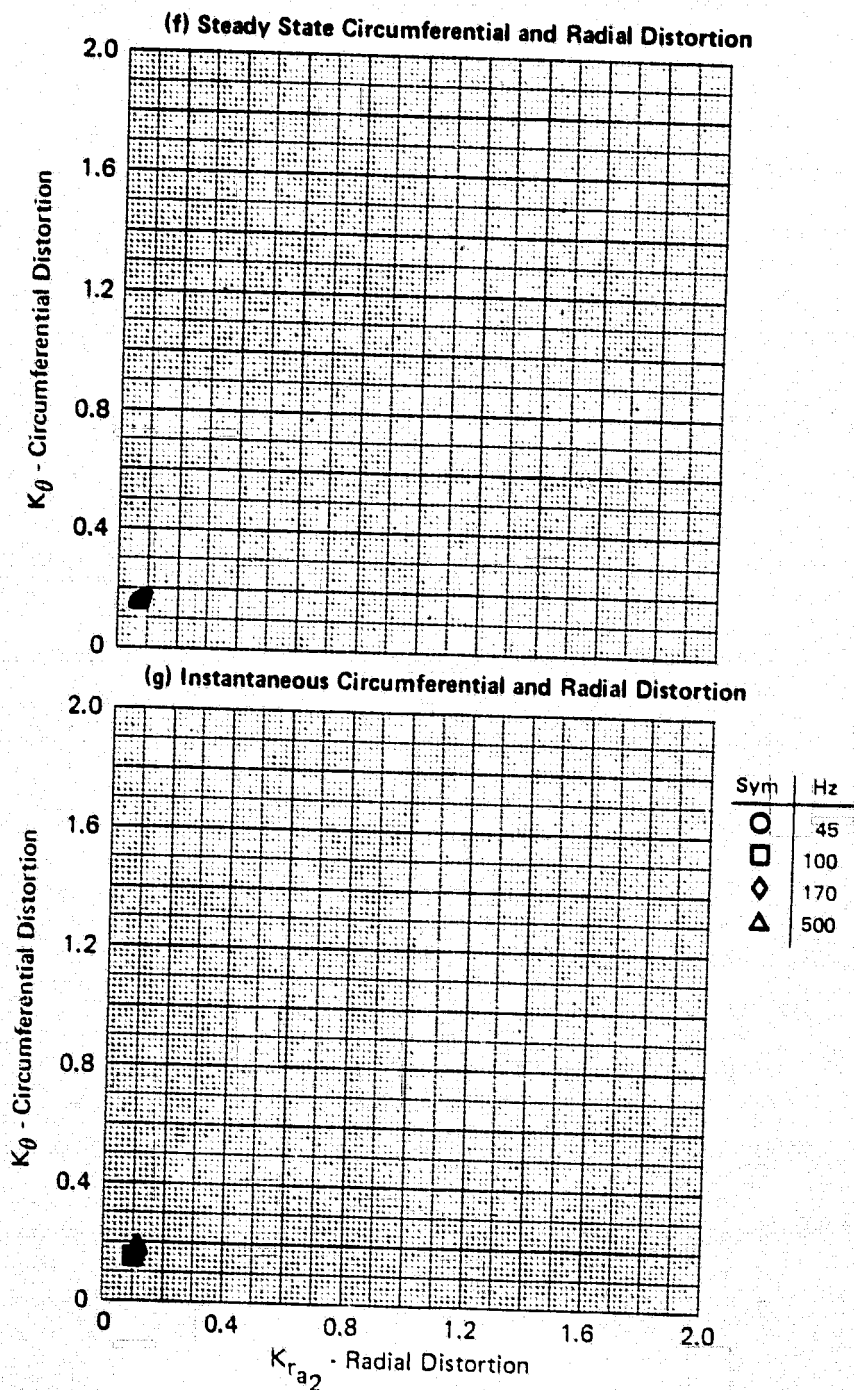
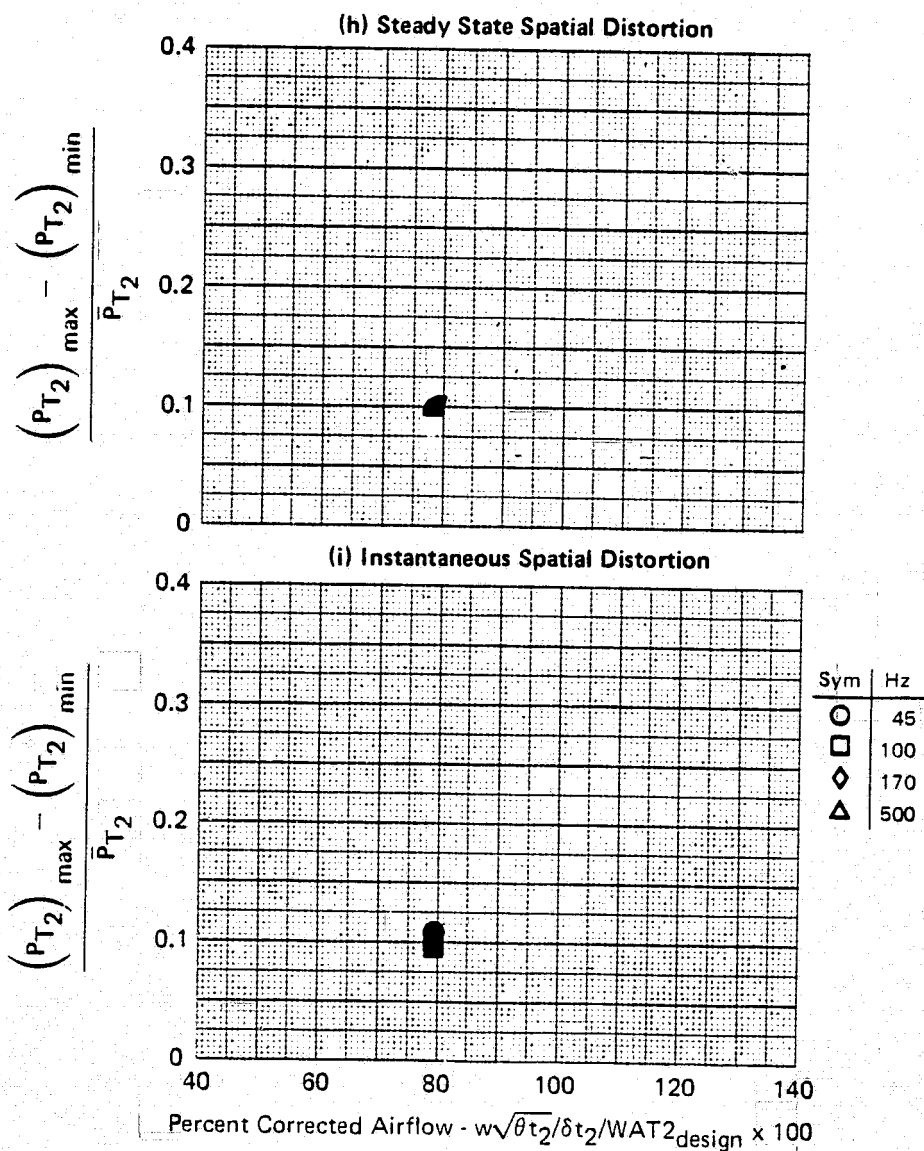


FIGURE G-53 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, $WAT2 = 78.9\%$

GP77-0658-2

FLIGHT - NASA Data Study
 Part/Point - 416/1, Ident 53
 RHO DELTA3 BYPASS CIVV
 -2.9 18.2 0.0 -25.00



GP77-0658-4

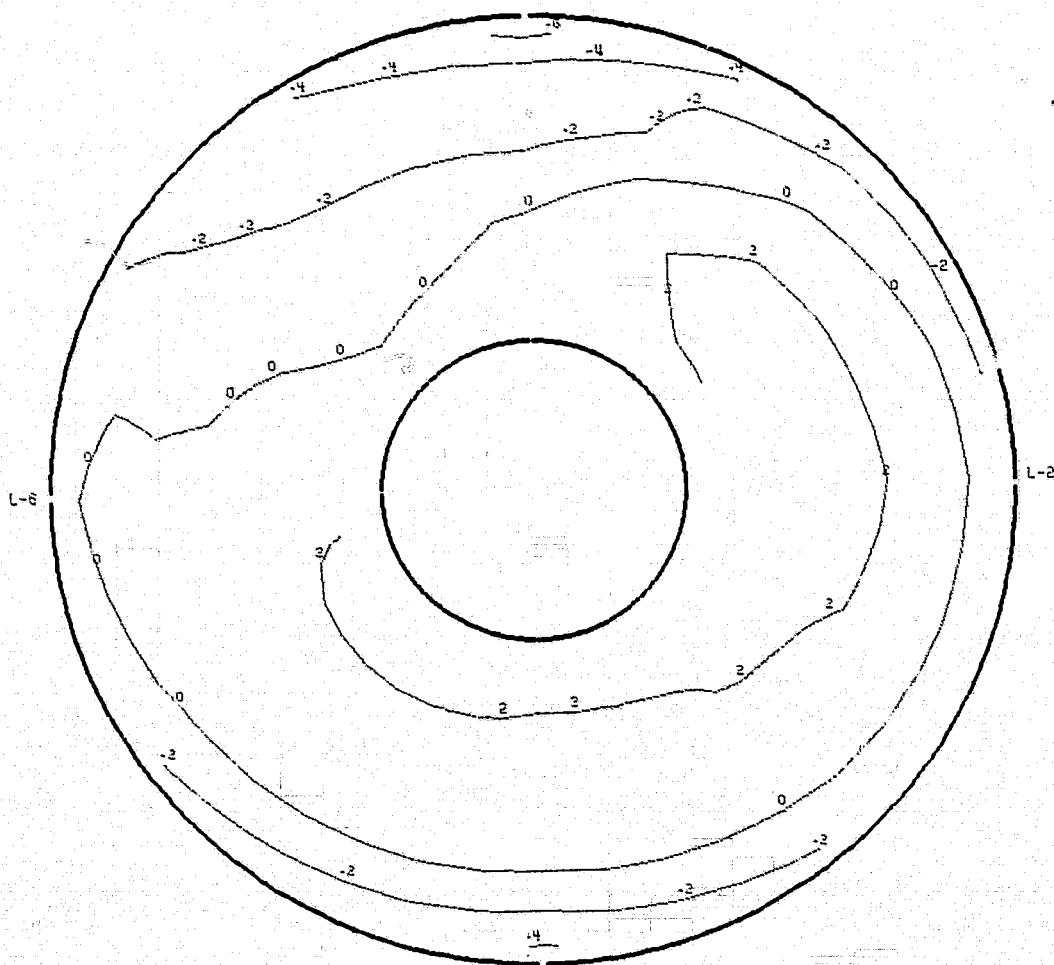
FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, $WAT2 = 78.9\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 416/1 IDENT. 53
THE SEGMENT START TIME WAS AT 16:09:18.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.2	17612(57453)	-2.8	18.2	0.0	78.9%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
45.42 (6.587)	1.0	.1453	.0853	.4035	.5479	.1797	—	.0976

53 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 45.42 kPa (6.587 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

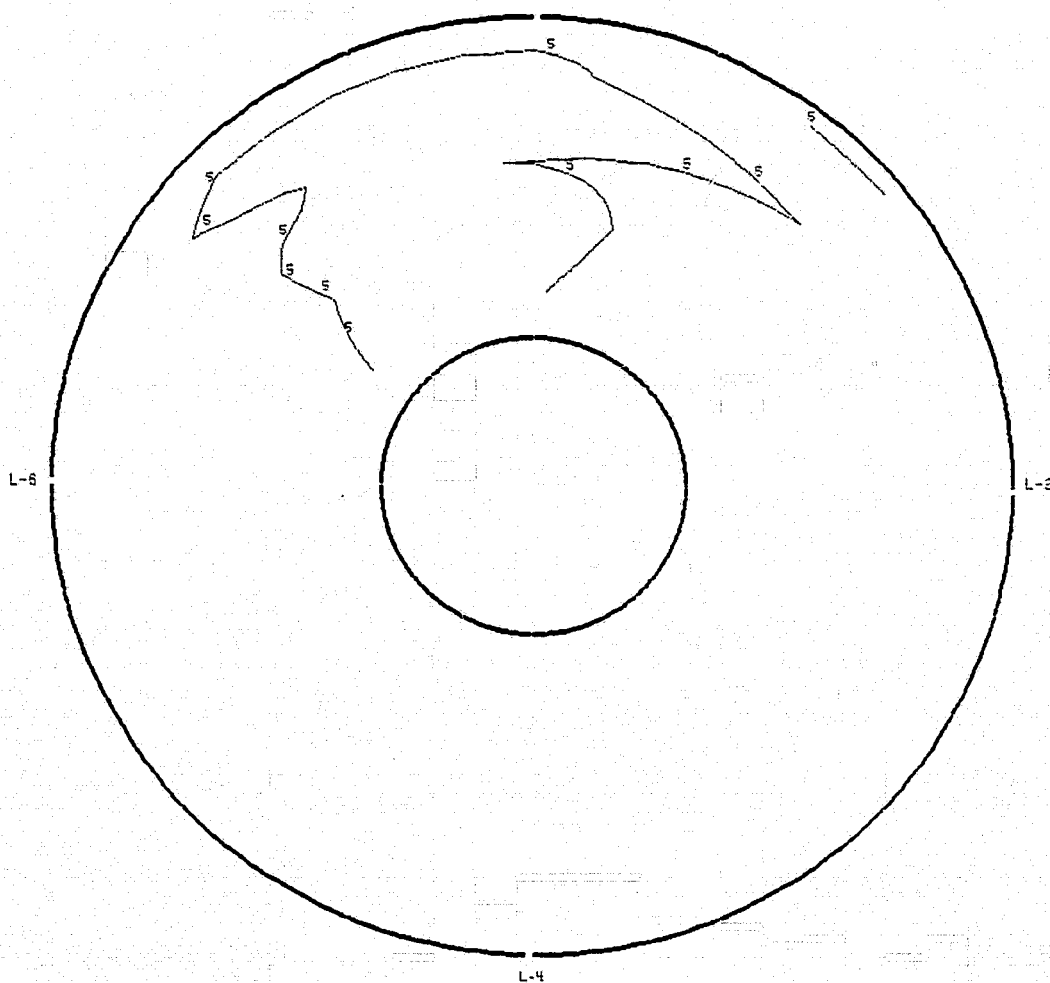
FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, WAT2 = 78.9 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 416/1 IDENT. 53
THE SEGMENT START TIME WAS AT 18:09: 18.507

MACH	ALPHA	BETA	ALT	FHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.2	17512 (57453)	-2.9	18.2	0.0	78.9%	-25.00

53 (k) Turbulence Contour
45 Hz



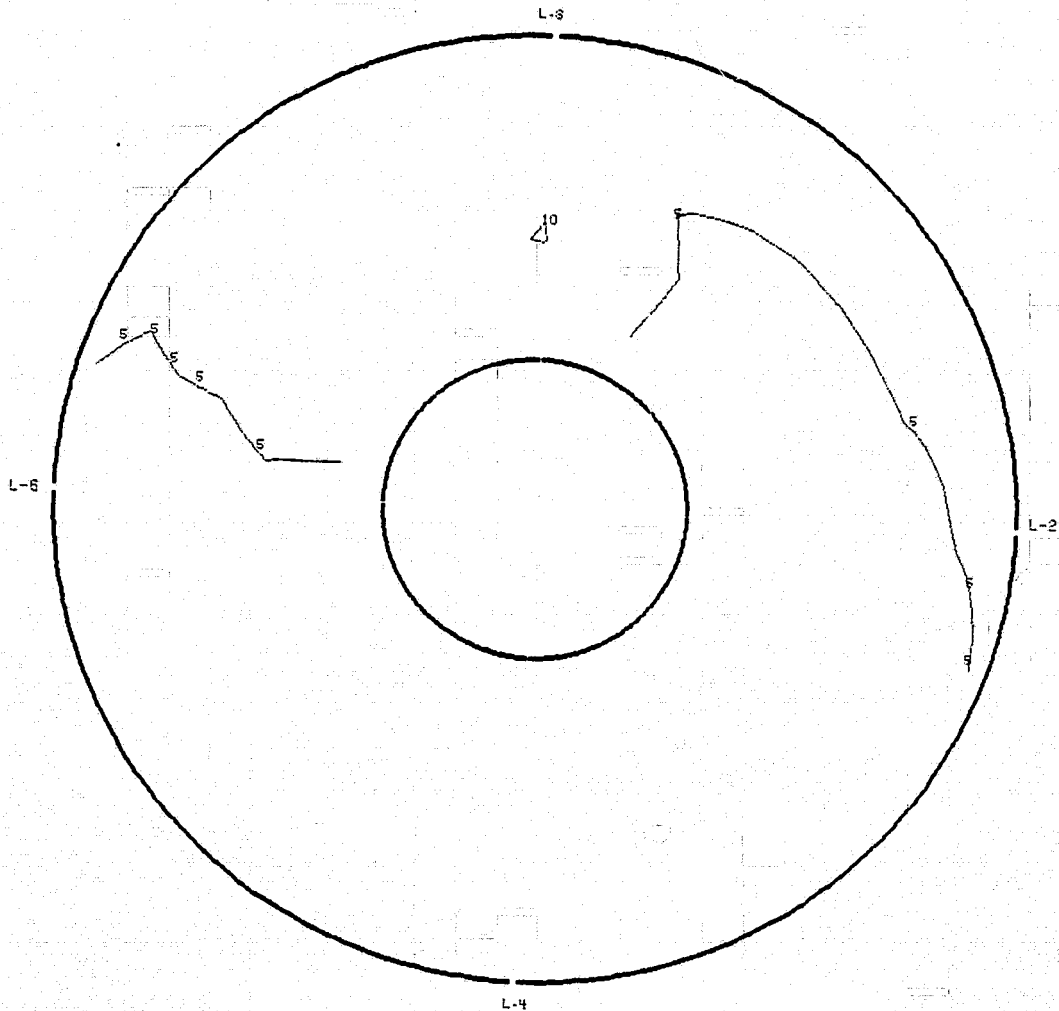
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0031
FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, $WAT2 = 78.9\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 4181/1 IDENT. 53
THE SEGMENT START TIME WAS AT 16:09:19.108

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.2	17812 (57453)	-2.9	18.2	0.0	78.9%	-25.00

53 (I) Turbulence Contour
100 Hz



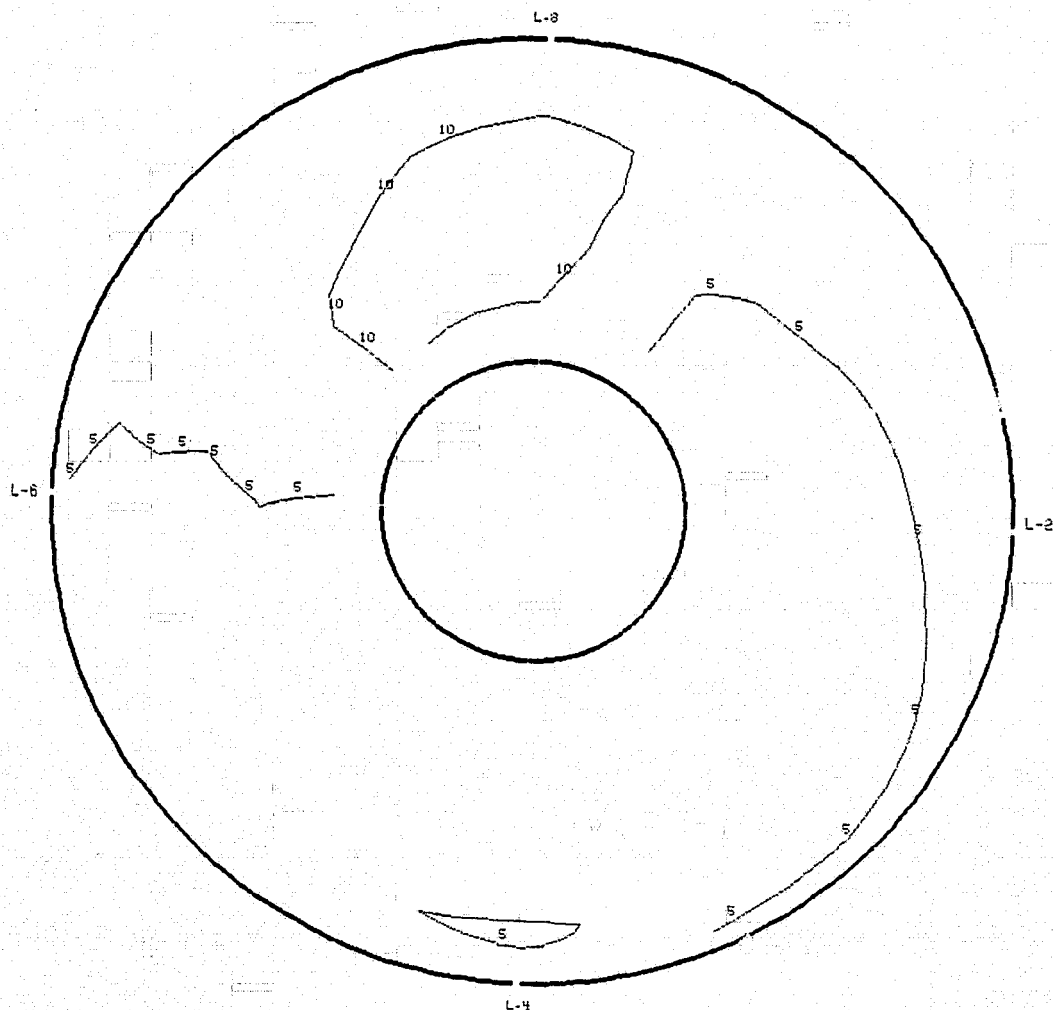
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0043
FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, $WAT2 = 78.9\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 416/1 IDENT. 53
THE SEGMENT START TIME WAS AT 16:09:18.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.20	17512(57453)	-2.8	18.2	0.0	78.9%	-25.00

53(m) Turbulence Contour
170 Hz



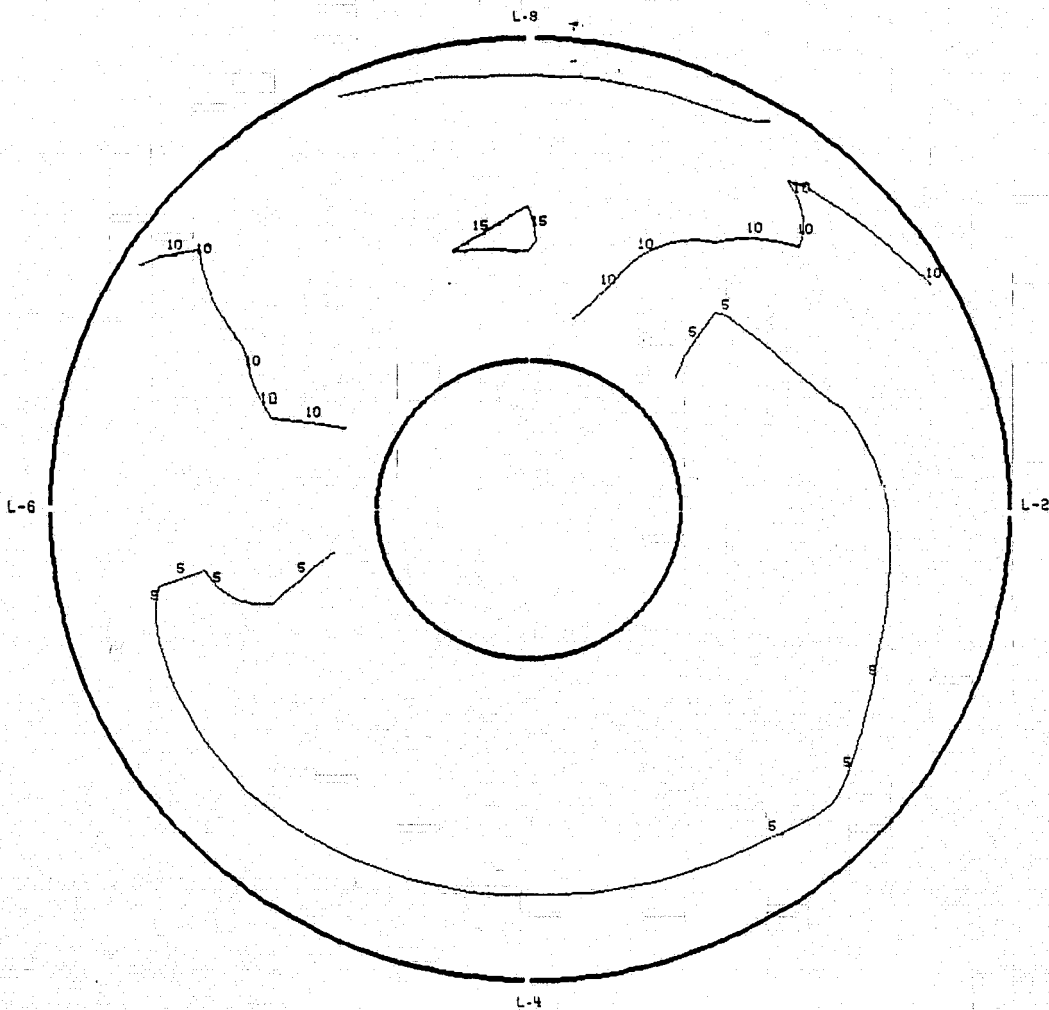
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0053
FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, $WAT2 = 78.9\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 416/1 IDENT. 53
THE SEGMENT START TIME WAS AT 16:09:18.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.2	17612 (57453)	-2.9	18.2	0.0	78.9%	-25.00

**53 (n) Turbulence Contour
500 Hz**



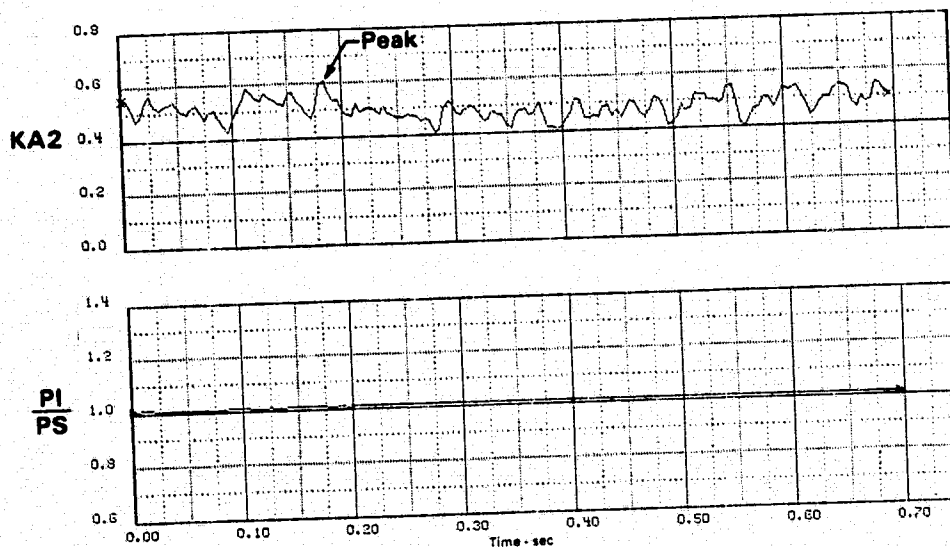
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0070
FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, WAT2 = 78.9 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 416/1 IDENT. 53
THE SEGMENT START TIME WAS AT 16:09: 18.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.2	17522 (57486)	-2.9	18.2	0.0	78.9%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
45.30 (6.57)	1.0032	0.1510	0.0966	0.4569	0.6079	0.2722	0.1380	0.0998

53(o) Time History Plots
45 Hz



PEAK AT TIME = 0.18332 SECONDS

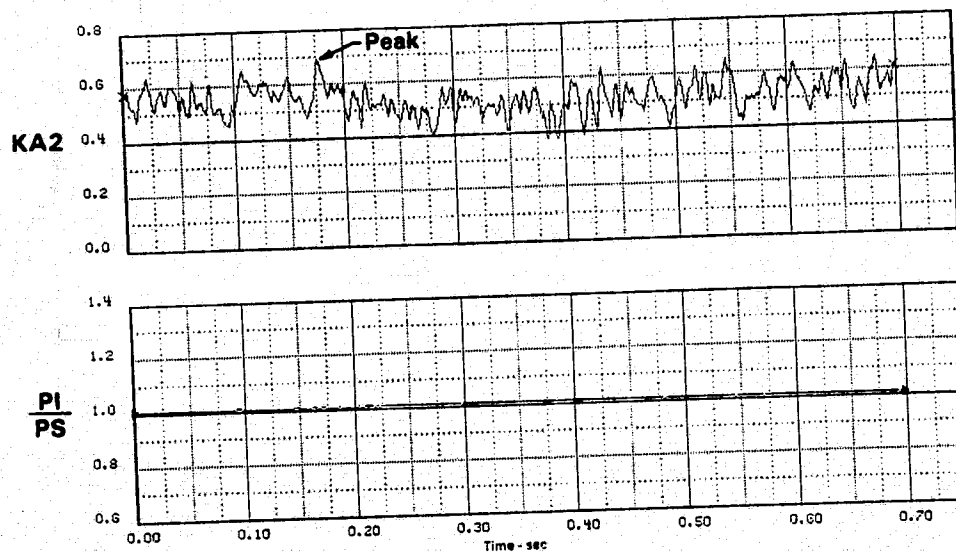
FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, WAT2 = 78.9 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 416/1 IDENT. 53
THE SEGMENT START TIME WAS AT 16:09: 18.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.2	17522 (57486)	-2.9	18.2	0.0	78.9%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
45.23 (6.58)	1.0064	0.1761	0.1083	0.5123	0.6584	0.3349	0.1561	0.1086

53(p) Time History Plots
100 Hz



PEAK AT TIME = 0.17638 SECONDS

FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, WAT2 = 78.9 %

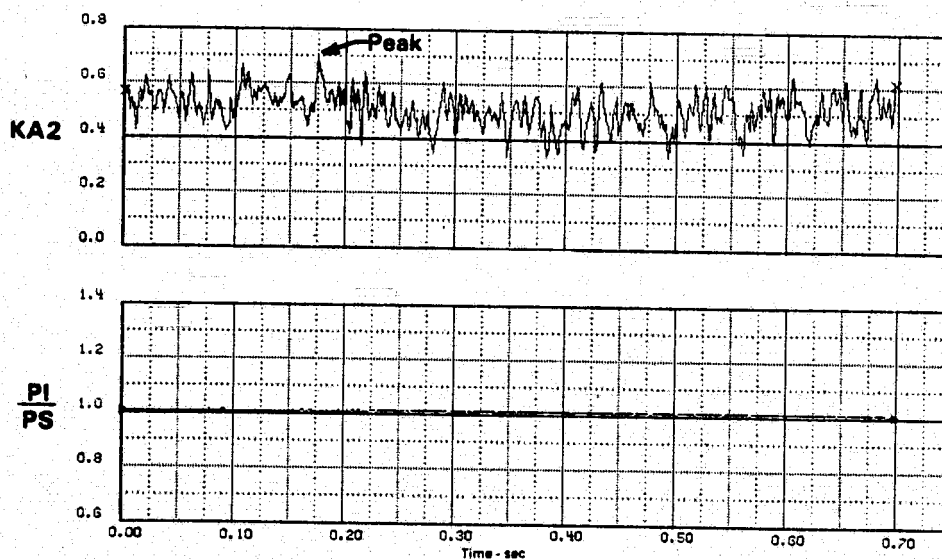
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 416/1 IDENT. 53
THE SEGMENT START TIME WAS AT 16:09:18.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.2	17522(57486)	-2.8	18.2	0.0	78.9%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
45.33(0.560)	1.0064	.1747	.1118	.5288	.7033	.3800	.1485	.1072

53(q) Time History Plots
170 Hz



PEAK AT TIME = 0.17444 SECONDS

FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, WAT2 = 78.9 %

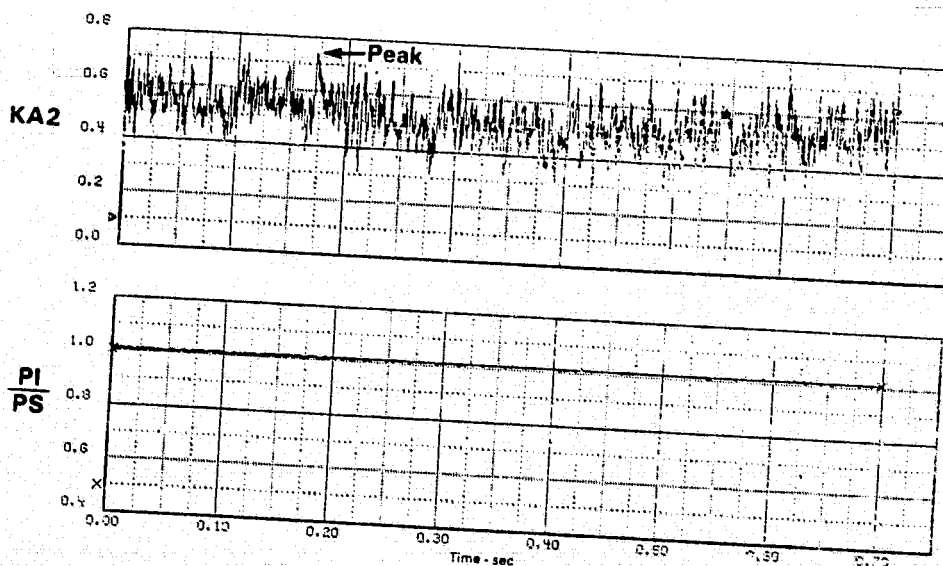
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 416/1 IDENT. 53
THE SEGMENT START TIME WAS AT 16:09:18.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.2	17522 (57486)	-2.9	18.2	0.0	78.9%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
45.20 (6.556)	1.0058	0.1810	0.1172	0.5544	0.7354	0.4426	0.1379	0.1024

53(r) Time History Plots
500 Hz



PEAK AT TIME = 0.17194 SECONDS

FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, $WAT2 = 78.9\%$

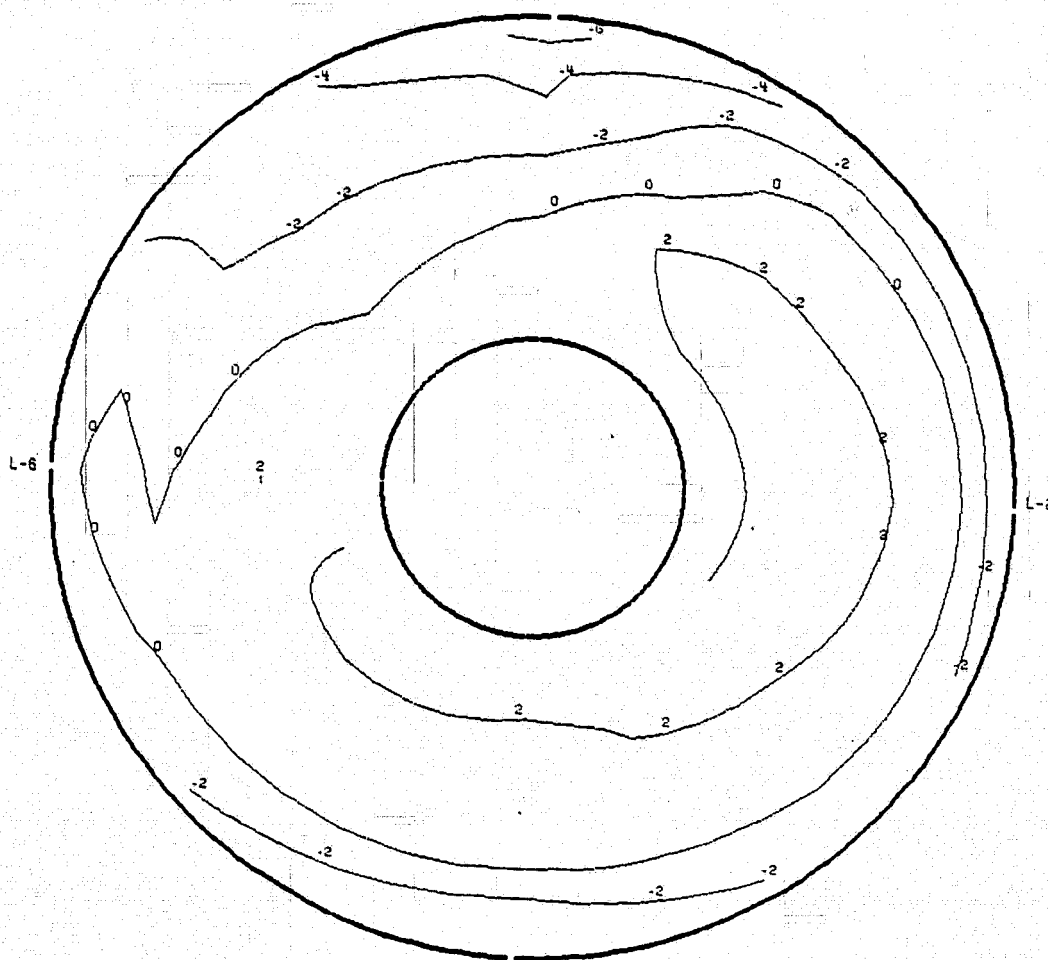
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 416/1 IDENT. 53
THE SEGMENT START TIME WAS AT 18:09: 18.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.2	17522 (57486)	-2.9	18.2	0.0	78.9%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
45.30 (6.57)	1.0032	0.1510	0.0966	0.4569	0.8079	0.2722	0.1380	0.0998

53 (s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz



MEAN FACE PRESSURE = 45.30 kPa (6.57 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.18332 SECONDS

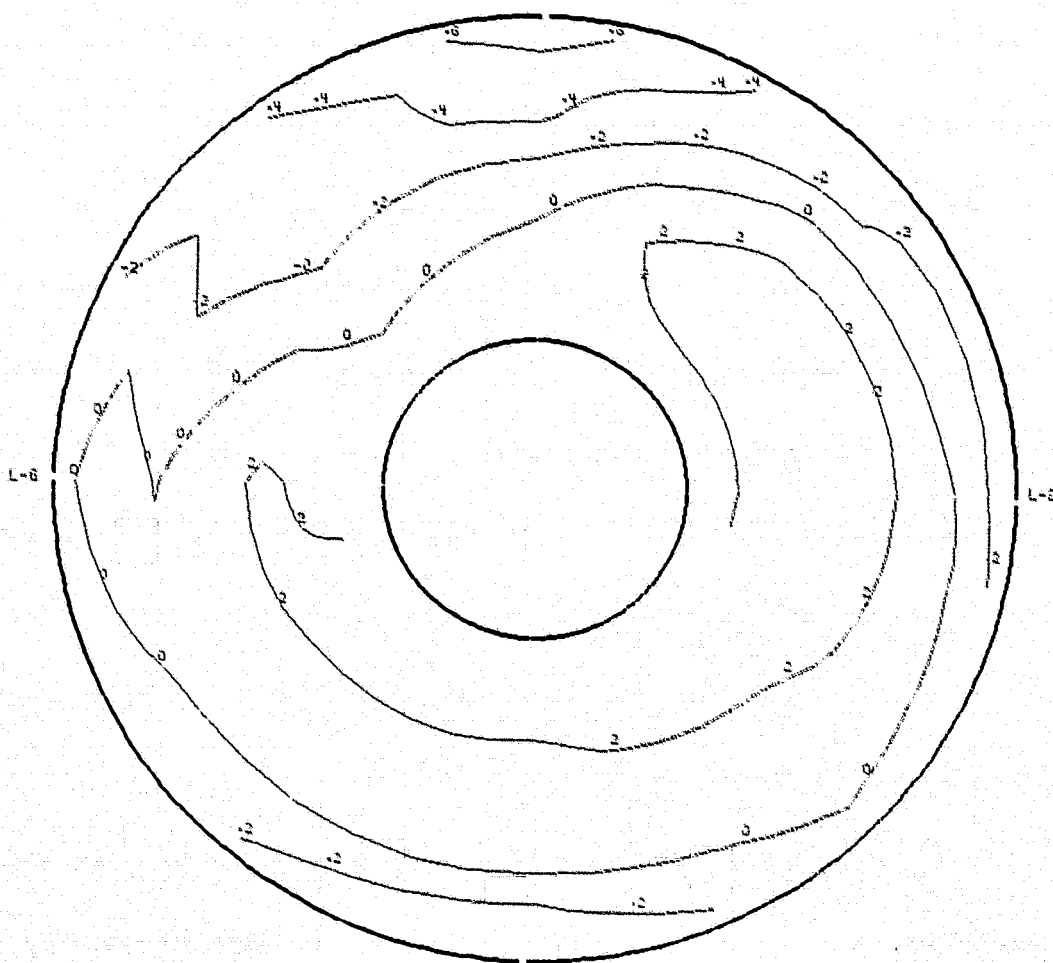
FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, WAT2 = 78.9 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 410/1 IDENT. 53
THE SEGMENT START TIME WAS AT 10:00:10.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.2	17622 (57486)	-2.9	18.2	0.0	78.9%	-26.00
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	KOSP	D2
45.23 (6.56)	1.0064	0.1761	0.1083	0.5123	0.6884	0.3349	0.1561	0.1086

53 (t) Instantaneous Total Pressure Contour at Peak Instantaneous Ka_2
100 Hz



MEAN FACE PRESSURE = 45.23 kPa (6.56 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.17638 SECONDS

FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, $WAT2 = 78.9\%$

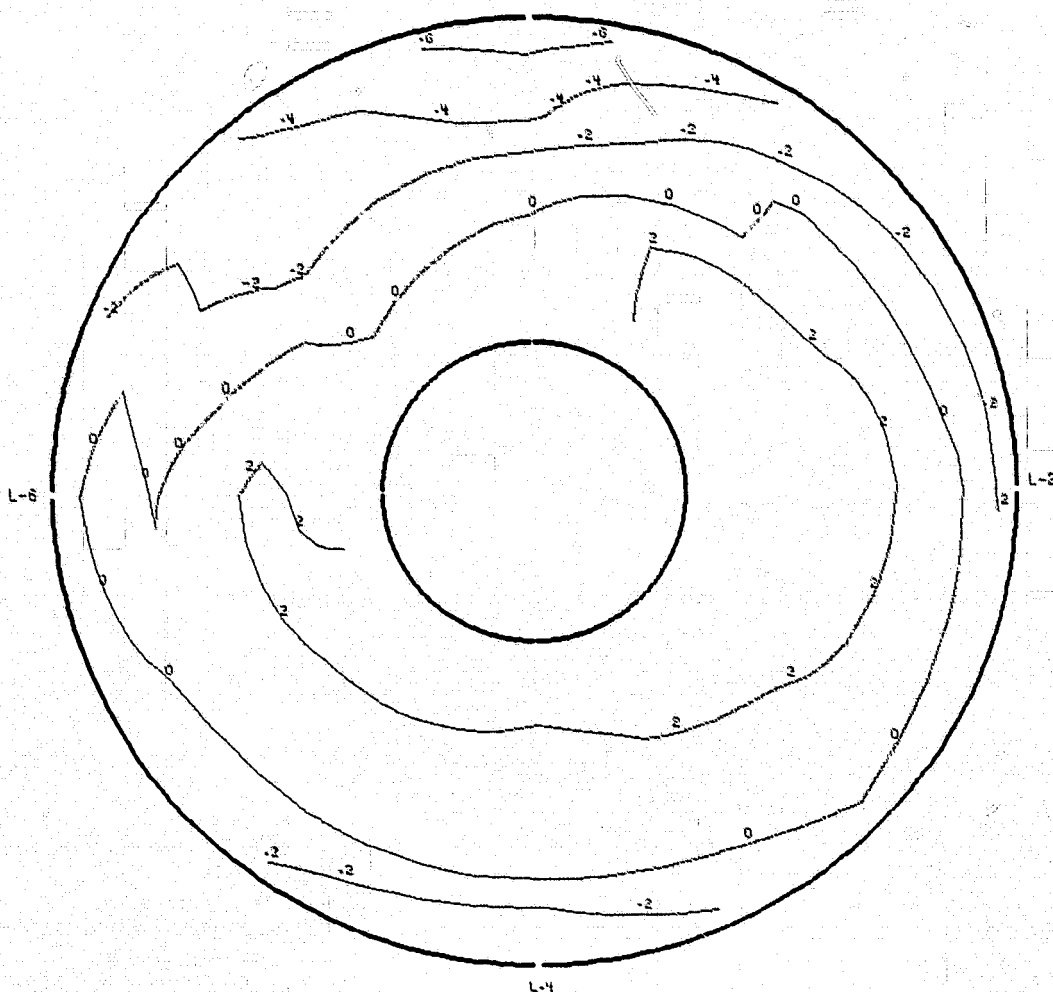
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 418/1 IDENT. 53
THE SEGMENT START TIME WAS AT 16:09:18.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.2	17522(57486)	-2.8	18.2	0.0	78.9%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
45.23(6.560)	1.0064	.1747	.1118	.5288	.7033	.3800	.1485	.1072

53(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 45.23 kPa (6.560 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.17444 SECONDS

FIGURE G-53 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, WAT2 = 78.9%

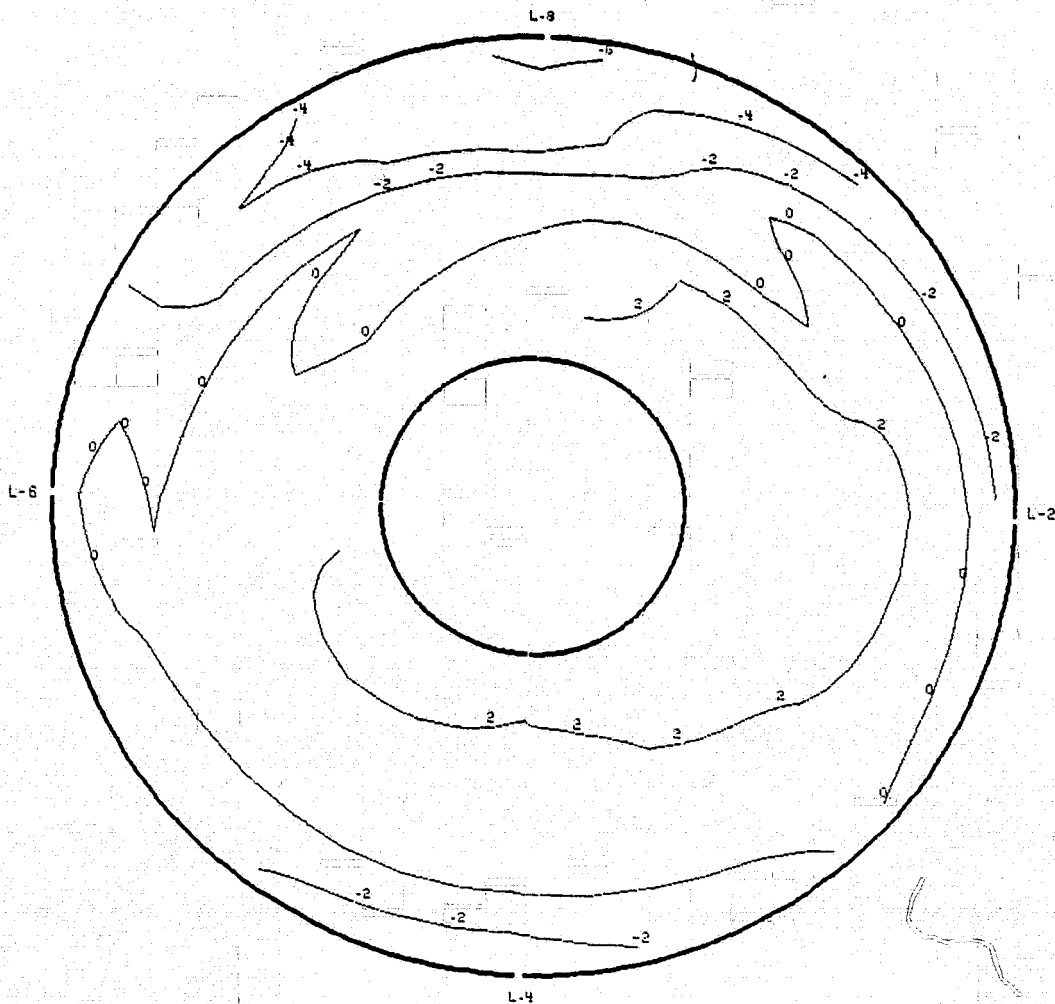
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 416/1 IDENT. 53
THE SEGMENT START TIME WAS AT 16:09:18.507

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
1.81	-2.3	0.2	17522 (57486)	-2.9	18.2	0.0	78.9%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
45.20 (6.556)	1.0058	0.1810	0.1172	0.5544	0.7384	0.4426	0.1379	0.1024

53 (v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz



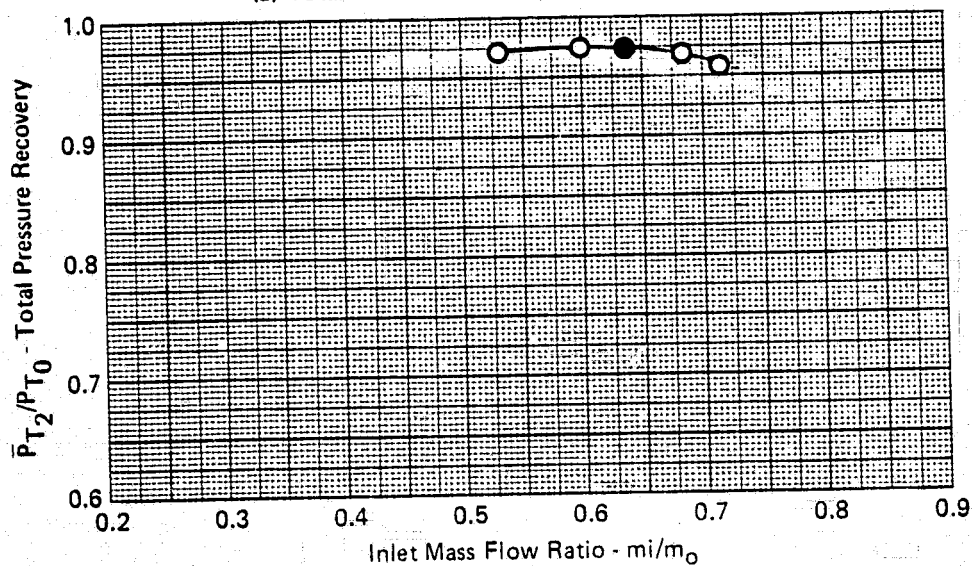
MEAN FACE PRESSURE = 45.20 kPa (6.556 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.17194 SECONDS

FIGURE G-53 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.81$, $\alpha = -2.3$, $\beta = 0.2$, $WAT2 = 78.9\%$

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FSCP - NASA Data Study
 Part/Point - 355/8, Ident 54
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



(b) Total Pressure Recovery vs Percent Corrected Airflow

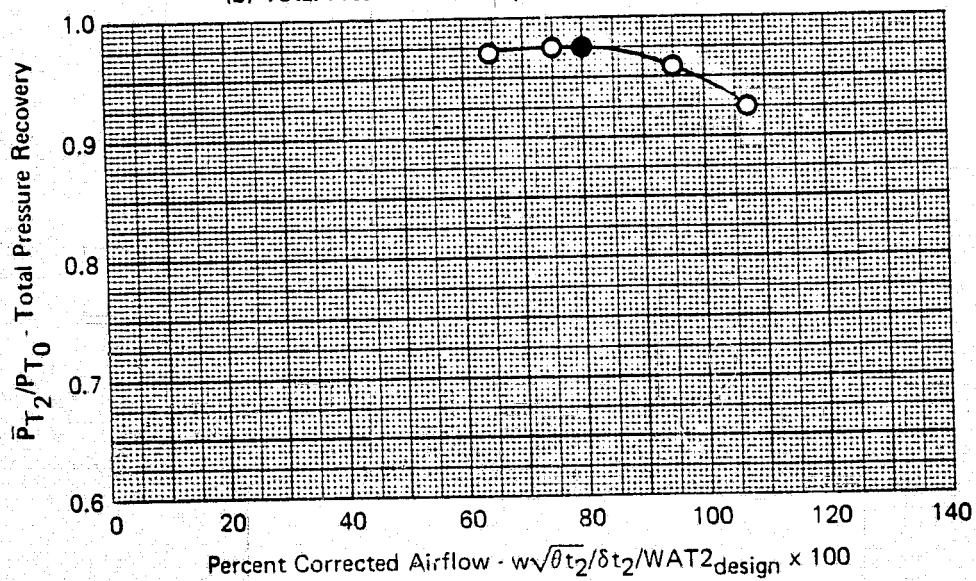
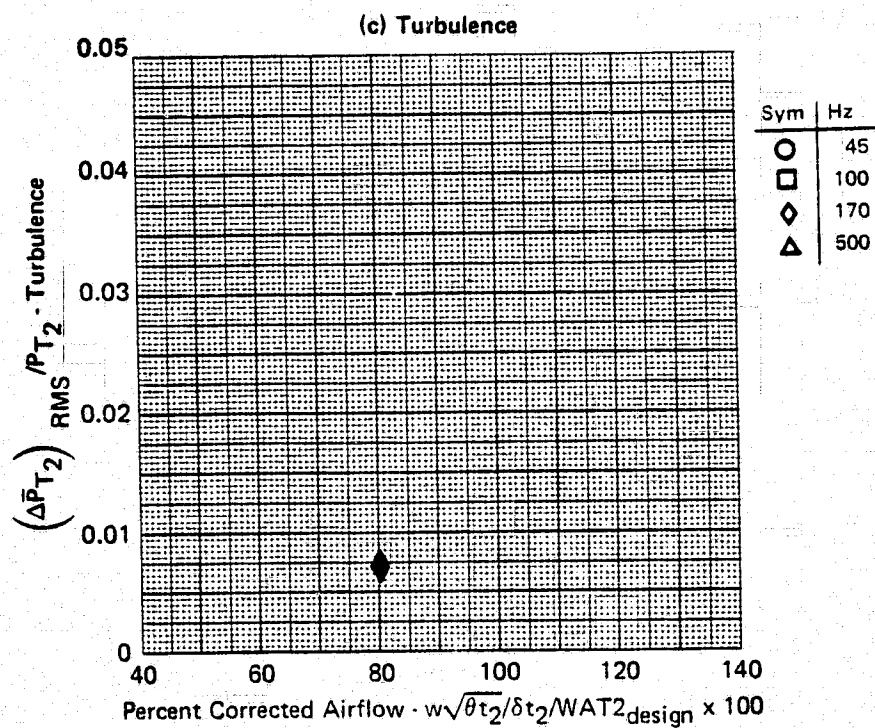


FIGURE G-54

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 79.9\%$

GP77-0658-1

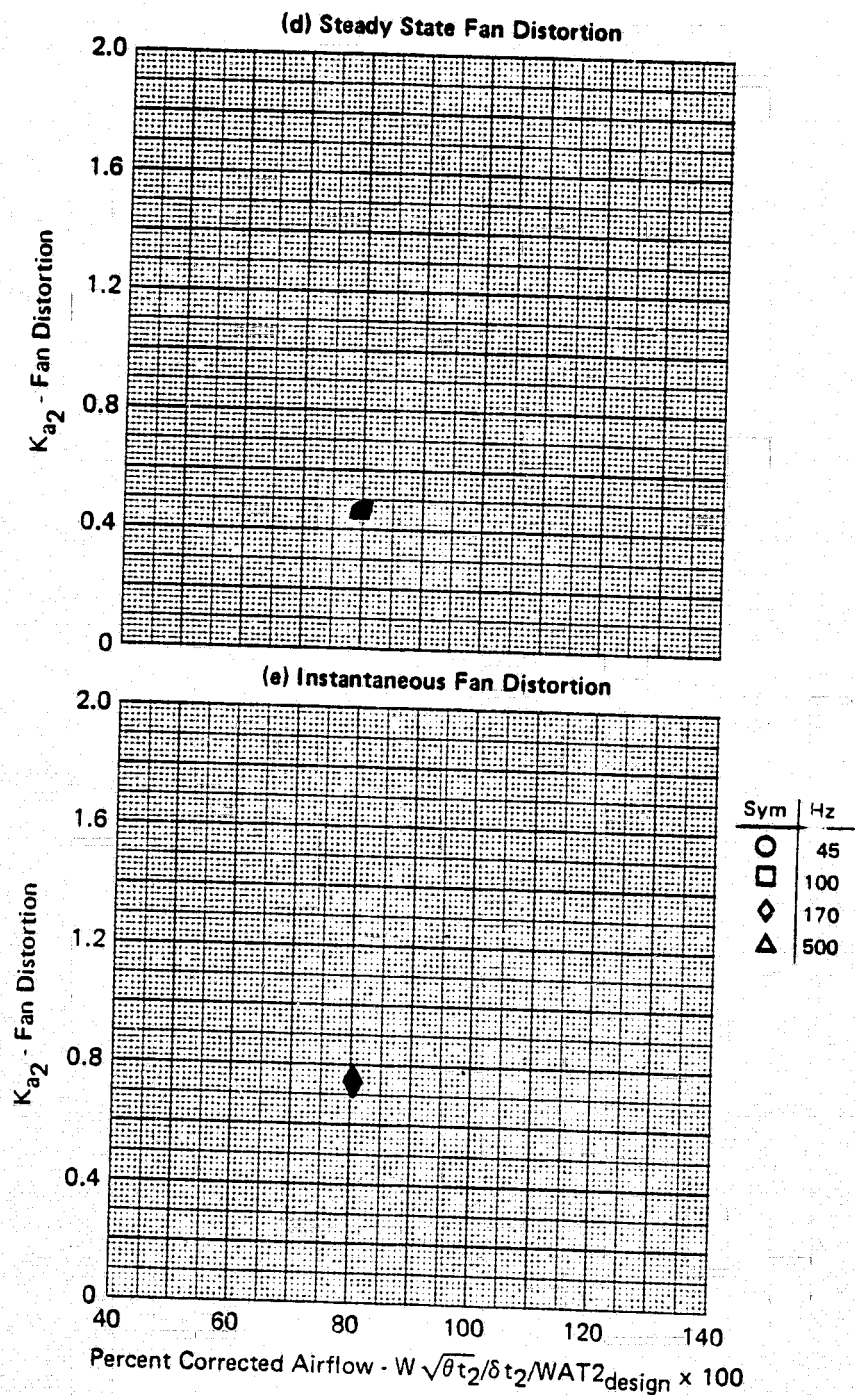
FSCP - NASA Data Study
 Part/Point - 355/8, Ident 54
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00



GP77-0658-5

FIGURE G-54 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 79.9\%$

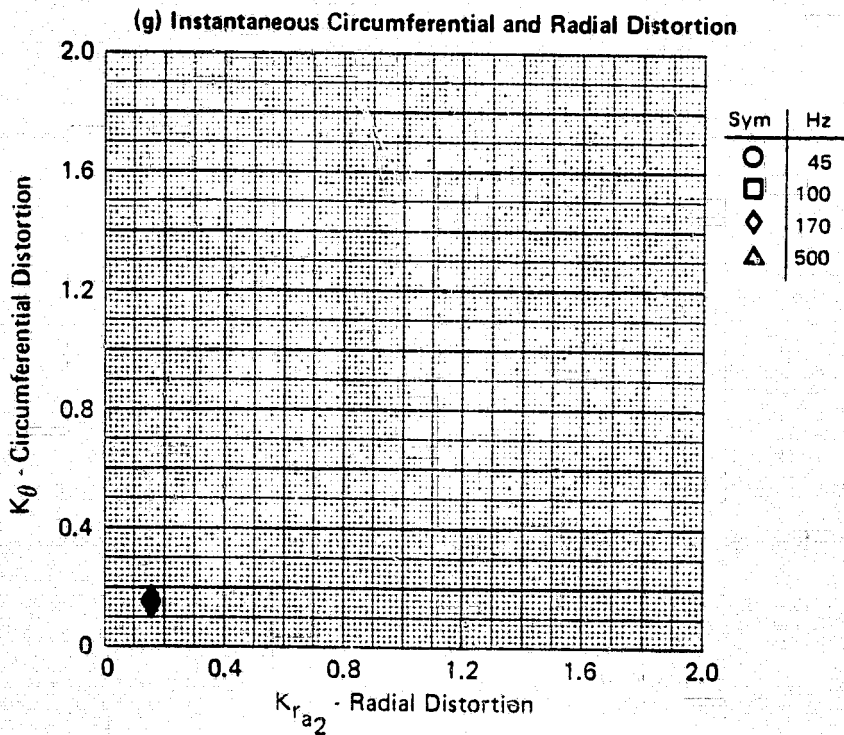
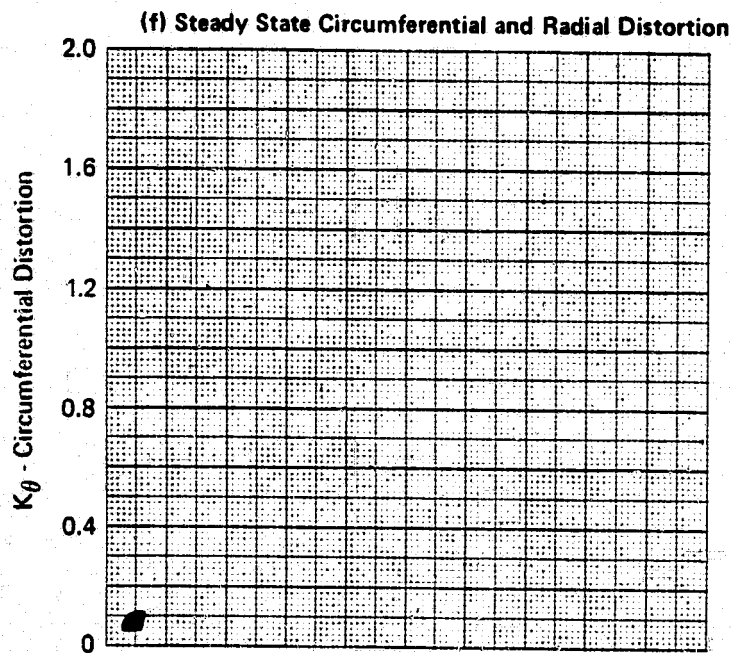
FSCP - NASA Data Study
 Part/Point - 355/8, Ident 54
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00



GP77-0658-3

FIGURE G-54 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 79.9\%$

FSCP - NASA Data Study
 Part/Point - 355/8, Ident 54
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00



GP77-0558-2

FIGURE G-54 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 79.9%

FSCP - NASA Data Study
 Part/Point - 355/8, Ident 54
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00

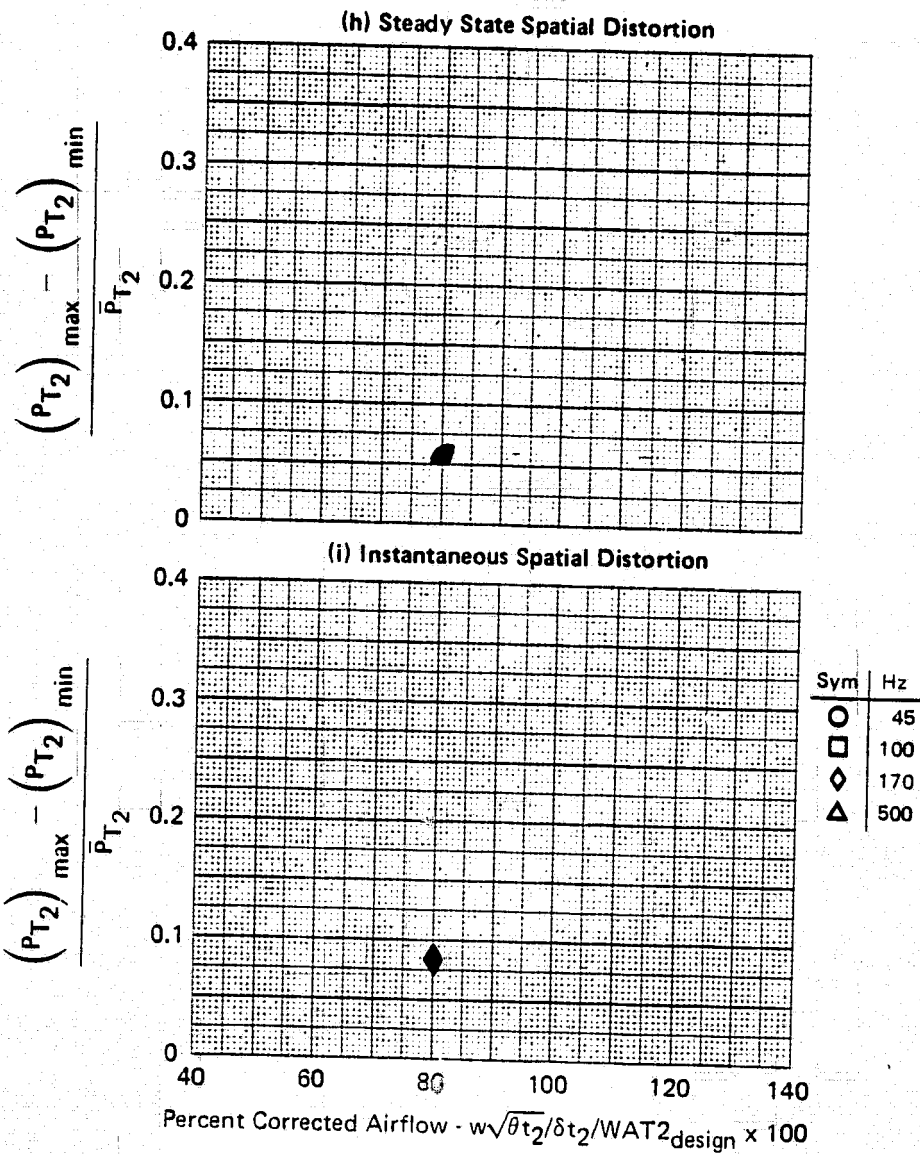


FIGURE G-54 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 79.9\%$

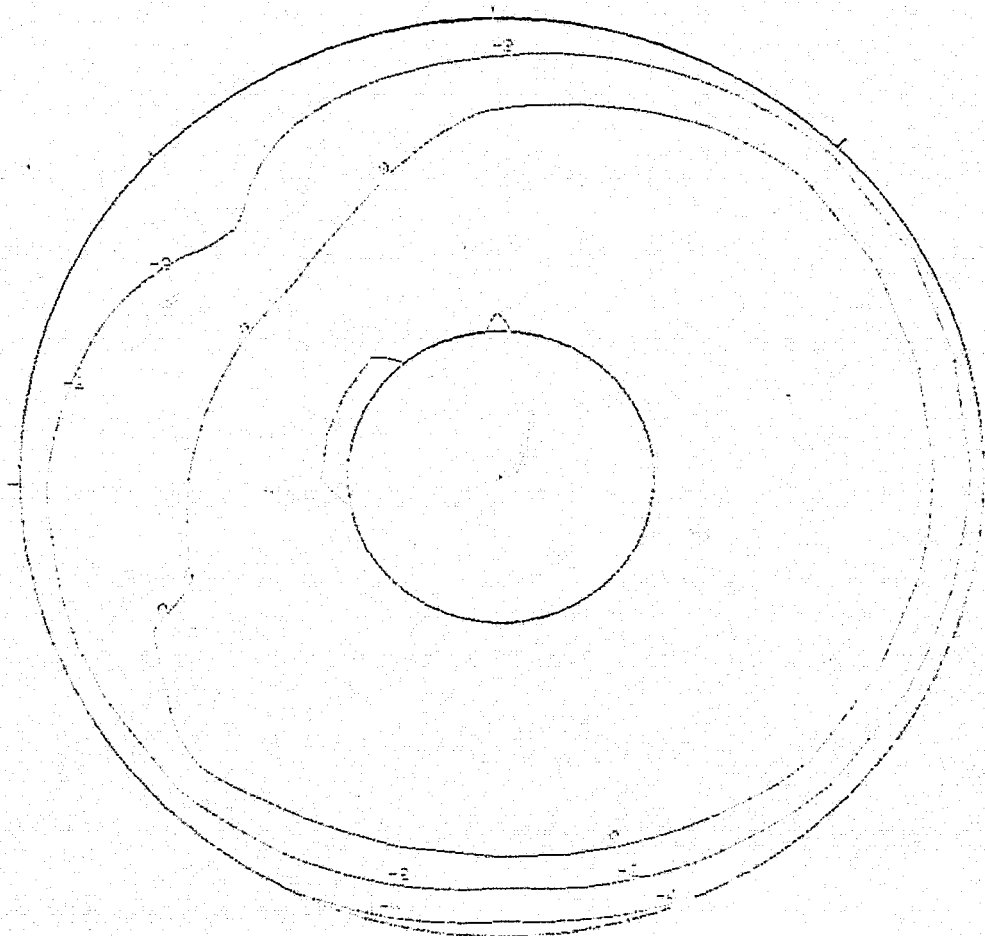
GP77-0658-4

FSCP - NASA DATA STUDY

DATA PART/POINT 355 / 3 IDENT. **54**
THE SEGMENT START TIME WAS AT 1:40: 3.50e

MACH 1.8	ALPHA 4	BETA 0	PHI 2.5	DELTA2 13.7	BYPASS 0.0	WAT2 79.9%	CIVV -35.0
P1 44.24 (6.41)	P1/P2 1.000	WTHETA 0.072	WPA2 0.099	BYPASS 0.000	M02 0.120	M02 0.097	D2 0.057

54 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 44.24 kPa (6.417 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

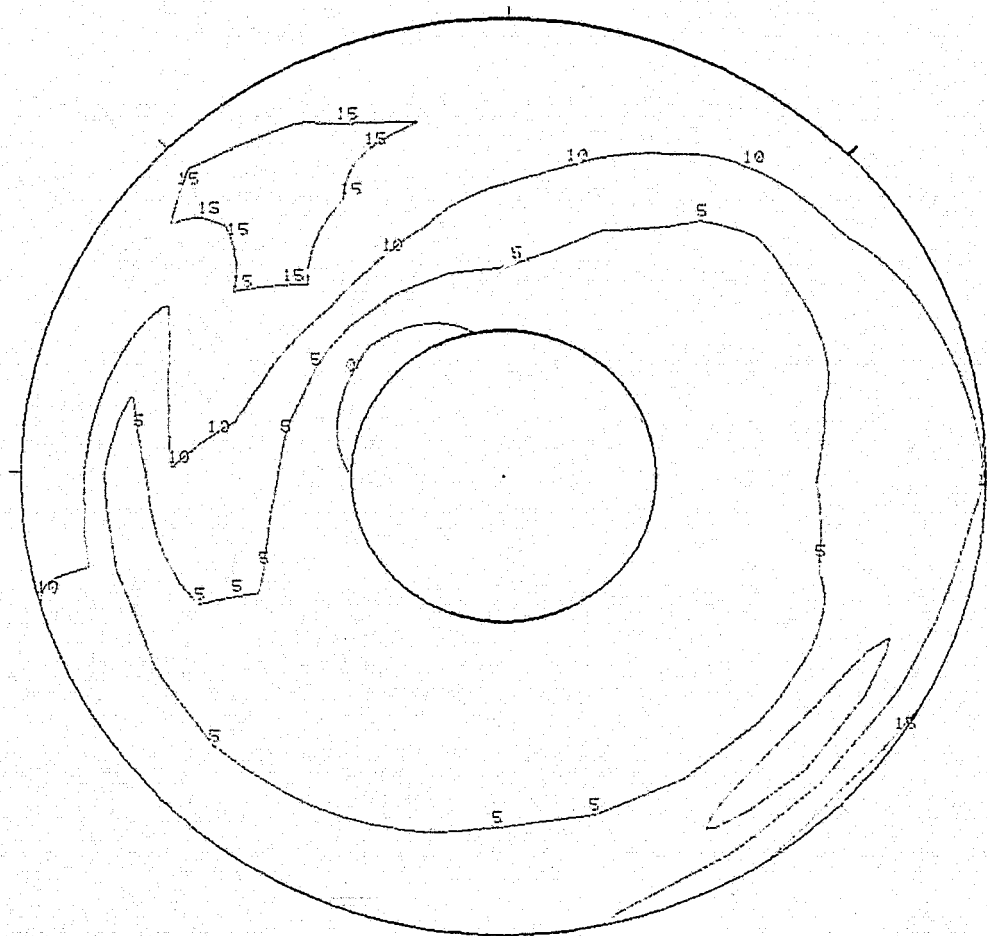
FIGURE G-54 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 79.9 %

FSCP - NASA DATA STUDY

DATA PART/POINT 355 / 3 IDENT. 54
THE SEGMENT START TIME WAS AT 1:40: 3.506

MACH	ALPHA	BETA	RHO	DELTA2	BYPASS	WAT2	CIVV
1.8	4	0	2.5	18.7	0.0	79.9%	-25.0

54(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00708

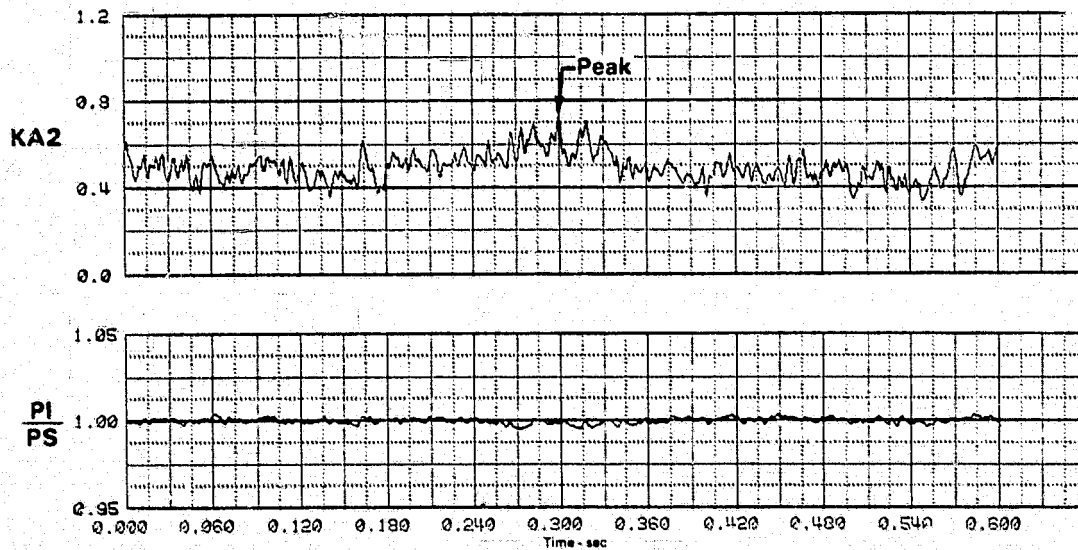
FIGURE G-54 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 79.9%

FSCP - NASA DATA STUDY

DATA PART/POINT 355 / 9 IDENT. 54
THE SEGMENT START TIME WAS AT 1:40: 3.506

MACH 1.8	ALPHA 4	BETA 0	RHO 2.5	DELTA3 18.7	BYPASS 0.0	WAT2 79.9%	CLVV -25.0
P1 44.17 (6.406)	P1/P3 0.998	KTHETA 0.152	KRA2 0.152	BKRA2 0.593	KA2 0.745	KC2 0.130	KOSP 0.129
							O2 0.085

54 (I) Time History Plots 170 Hz



PEAK AT TIME = 0.299714 SECONDS

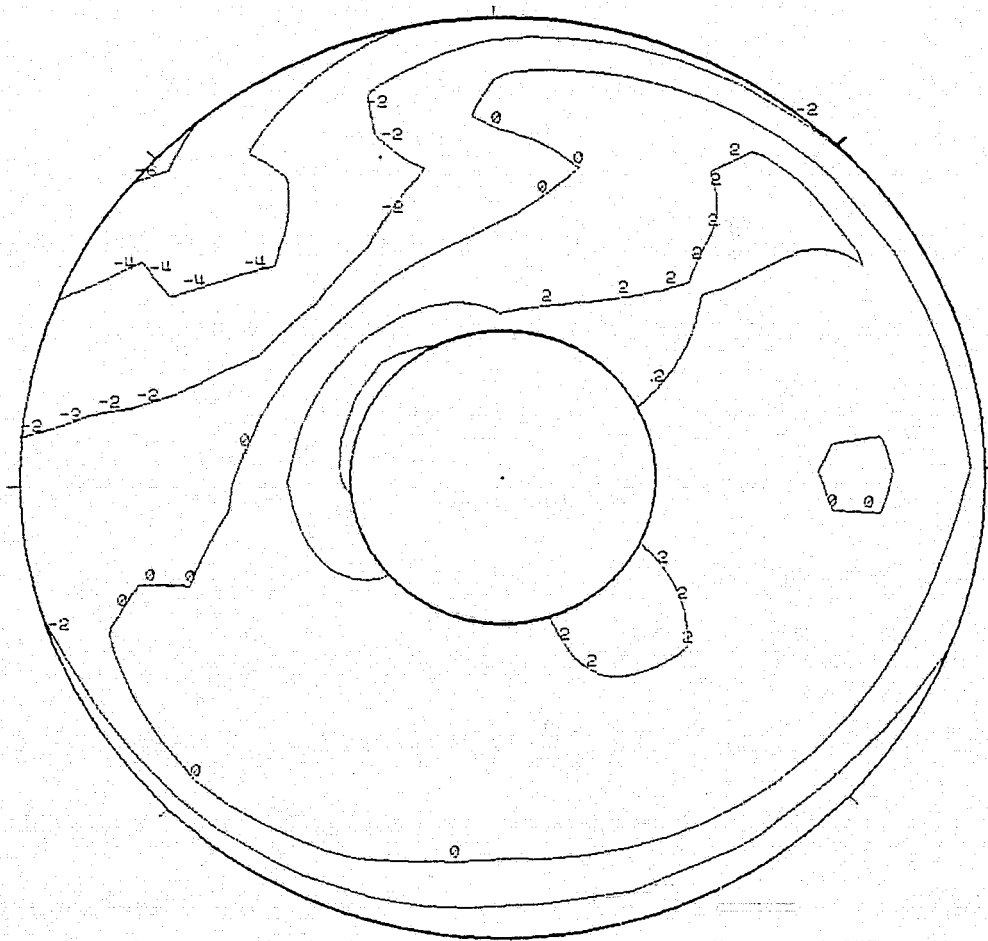
FIGURE G-54 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 79.9%

FSCP - NASA DATA STUDY

DATA PART/POINT 355 / 8 IDENT. **54**
THE SEGMENT START TIME WAS AT 1:40: 3.506

MACH 1.8	ALPHA 4	BETA 0	RHO 2.5	DELTA3 18.7	BYPASS 0.0	WAT2 79.9%	CIVV -25.0
PI 44.17 (6.406)	PI/PS 0.998	KTHETA 0.152	KRA2 0.152	BKRA2 0.533	KA2 0.745	KC2 0.190	KOSP 0.128
							D2 0.095

**54(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz**



MEAN FACE PRESSURE = 44.17 kPa (6.406 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.299714 SECONDS

FIGURE G-54 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8, \alpha = 4.0, \beta = 0.0, WAT2 = 79.9\%$

FSE - NASA Data Study
 Part/Point - 528/2, Ident 55
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00

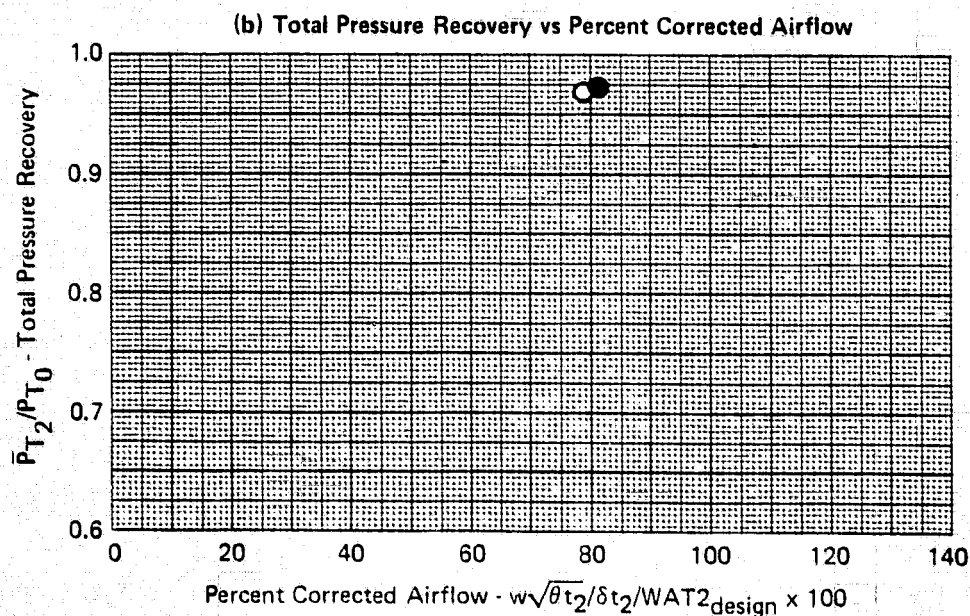
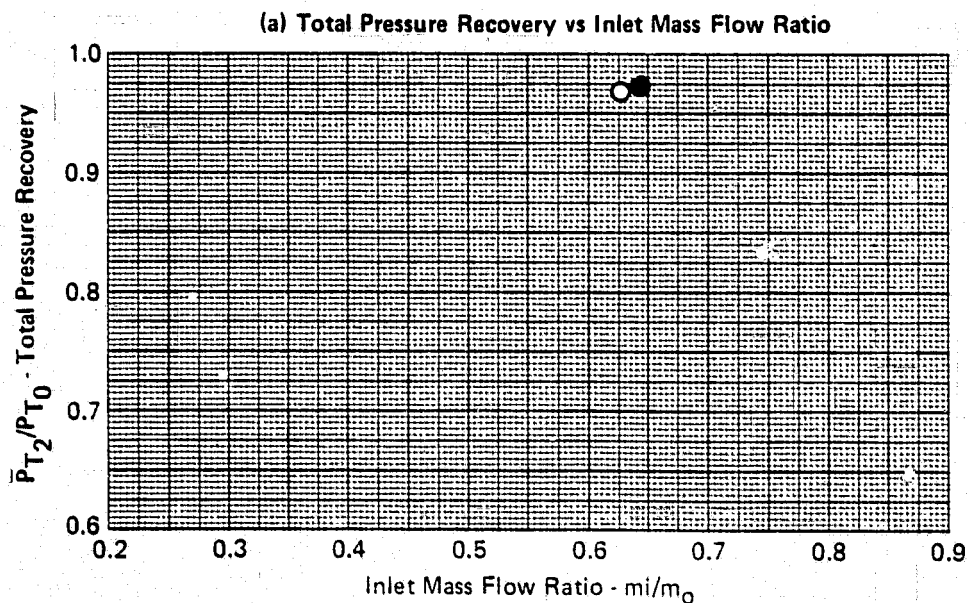
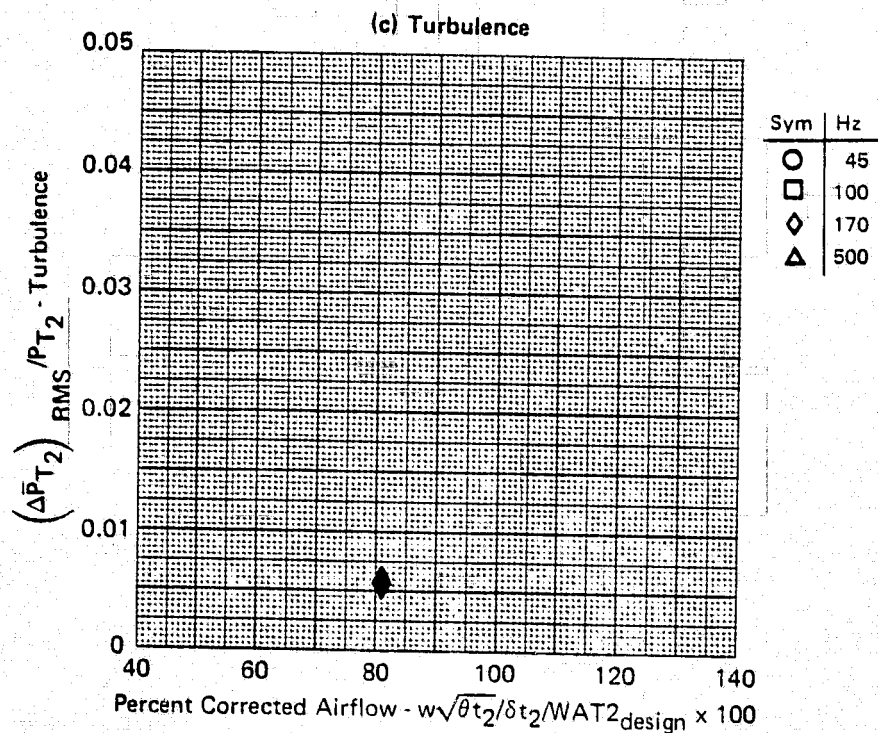


FIGURE G-55
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8, \alpha = 4.0, \beta = 0.0, WAT2 = 80.8 \%$

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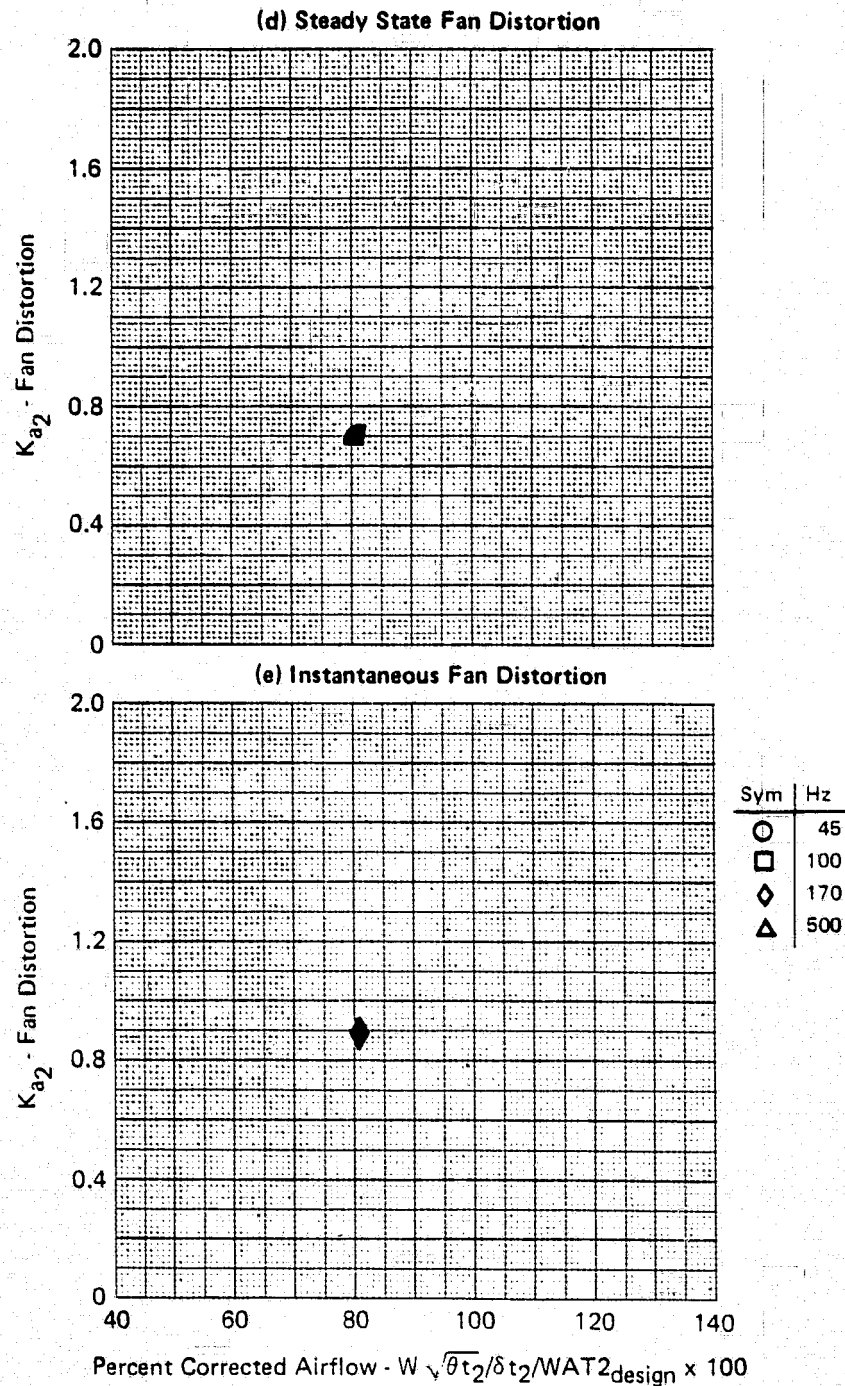
FSE - NASA Data Study
 Part/Point - 528/2, Ident 55
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00



GP77-0658-5

FIGURE G-55 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 80.8\%$

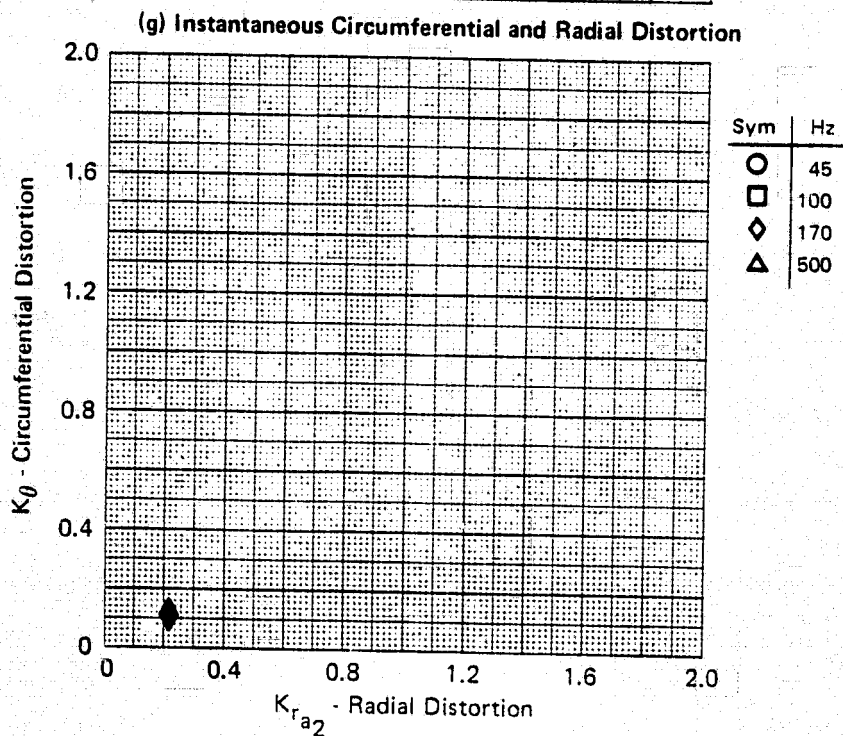
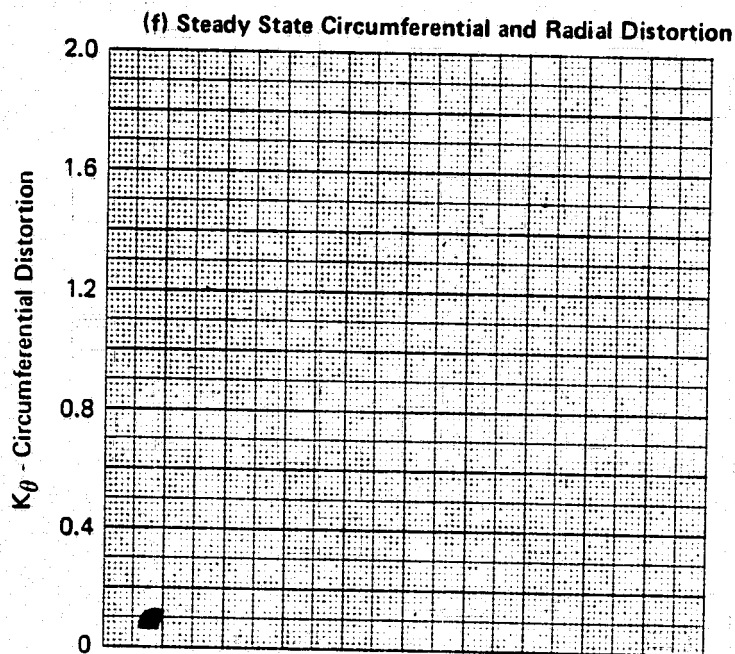
FSE - NASA Data Study
 Part/Point - 528/2, Ident 55
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00



GP77 0658-3

FIGURE G-55 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 80.8\%$

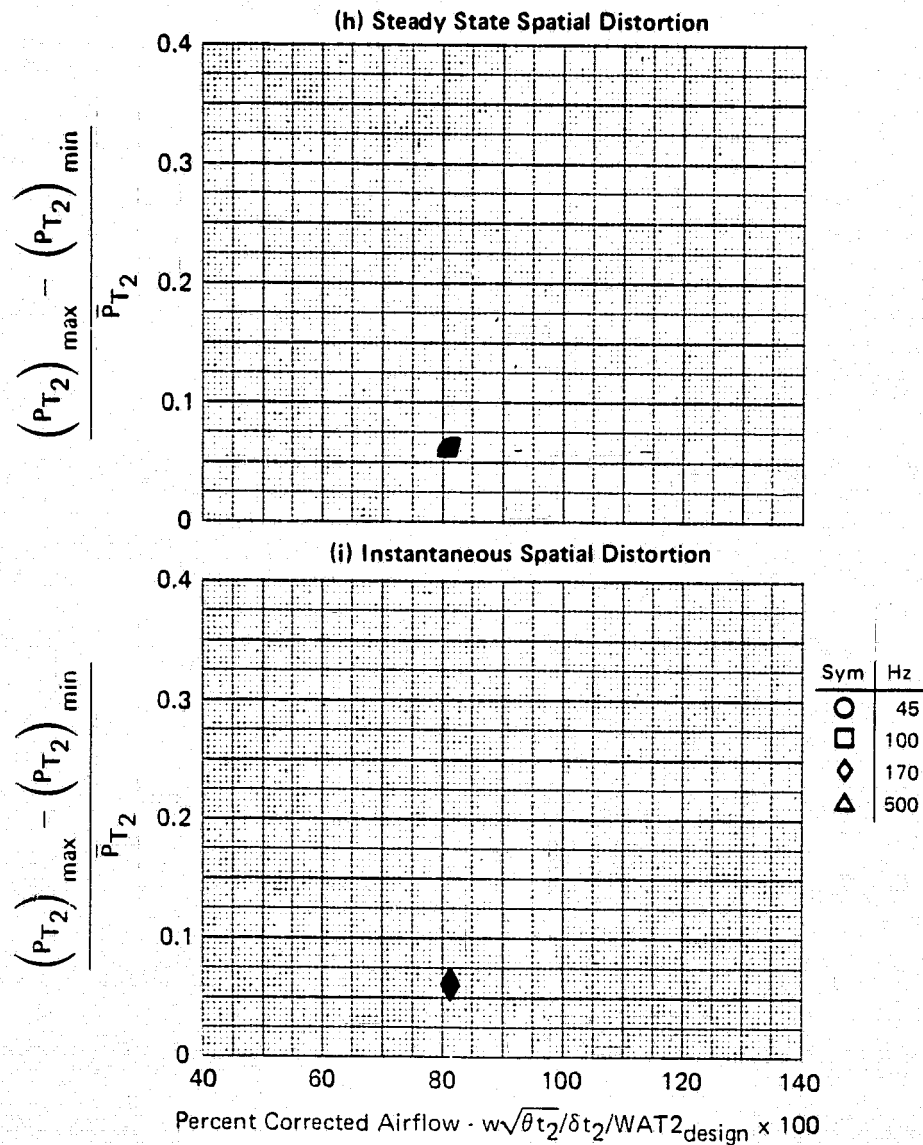
FSE - NASA Data Study
 Part/Point - 528/2, Ident 55
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00



GP77-0658-2

FIGURE G-55 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 80.8\%$

FSE - NASA Data Study
 Part/Point - 528/2, Ident 55
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00



GP77-0658-4

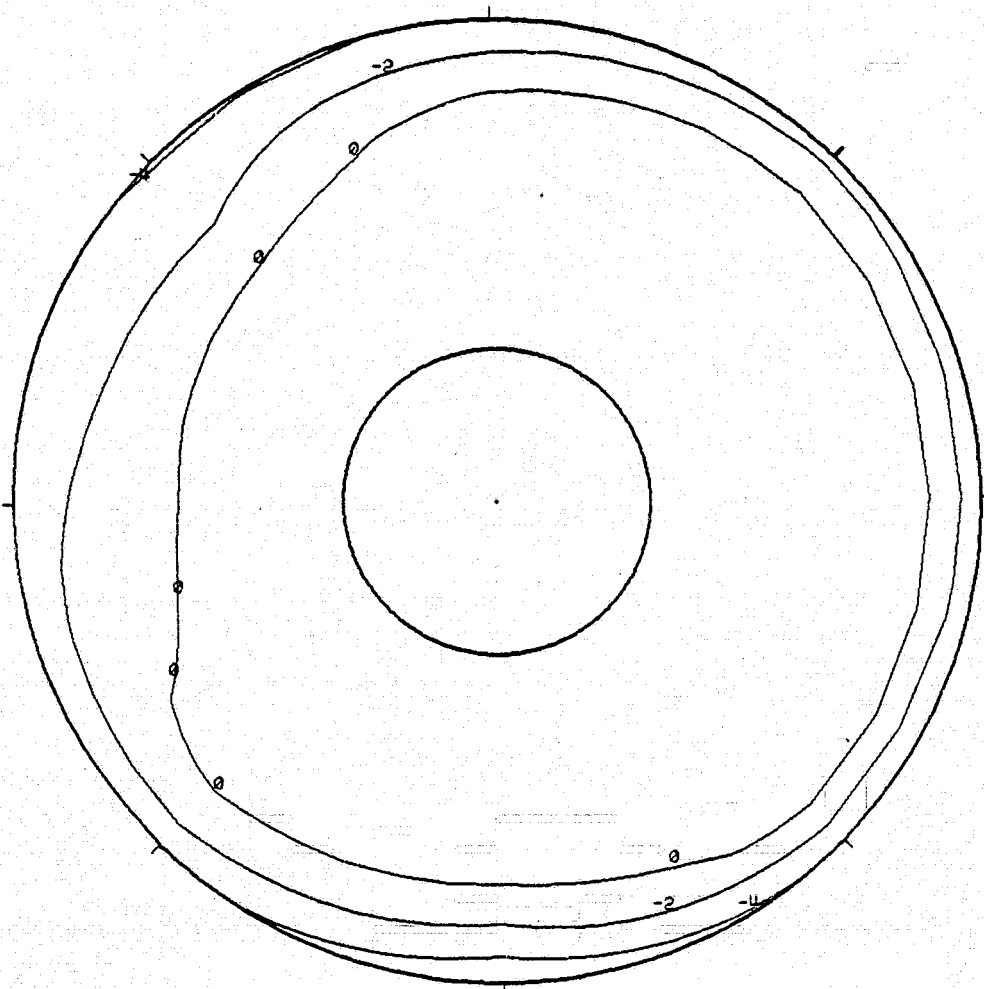
FIGURE G-55 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 80.8\%$

FSE - NASA DATA STUDY

DATA PART/POINT 528 / 2 IDENT. 55
THE SEGMENT START TIME WAS AT 3:40:36.422

MACH 1.3	ALPHA 4	BETA 0	RHO 2.5	DELTA3 18.7	BYPASS 0.0	WAT2 80.8%	CIVV -25.0
PI 44.41 (6.441)	PI/PS 1.030	KTHETA 0.075	KRA2 0.169	BKRA2 0.617	KA2 0.692	KC2 0.041	KESP 0.043
							D2 0.061

55 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 44.41 kPa (6.441 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-55 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 80.8 %

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FSE - NASA DATA STUDY

DATA PART/POINT 528 / 2 IDENT. 88
THE SEGMENT START TIME WAS AT 3:40:36.422

MACH
1.8

ALPHA
4

BETA
0

RHO
2.5

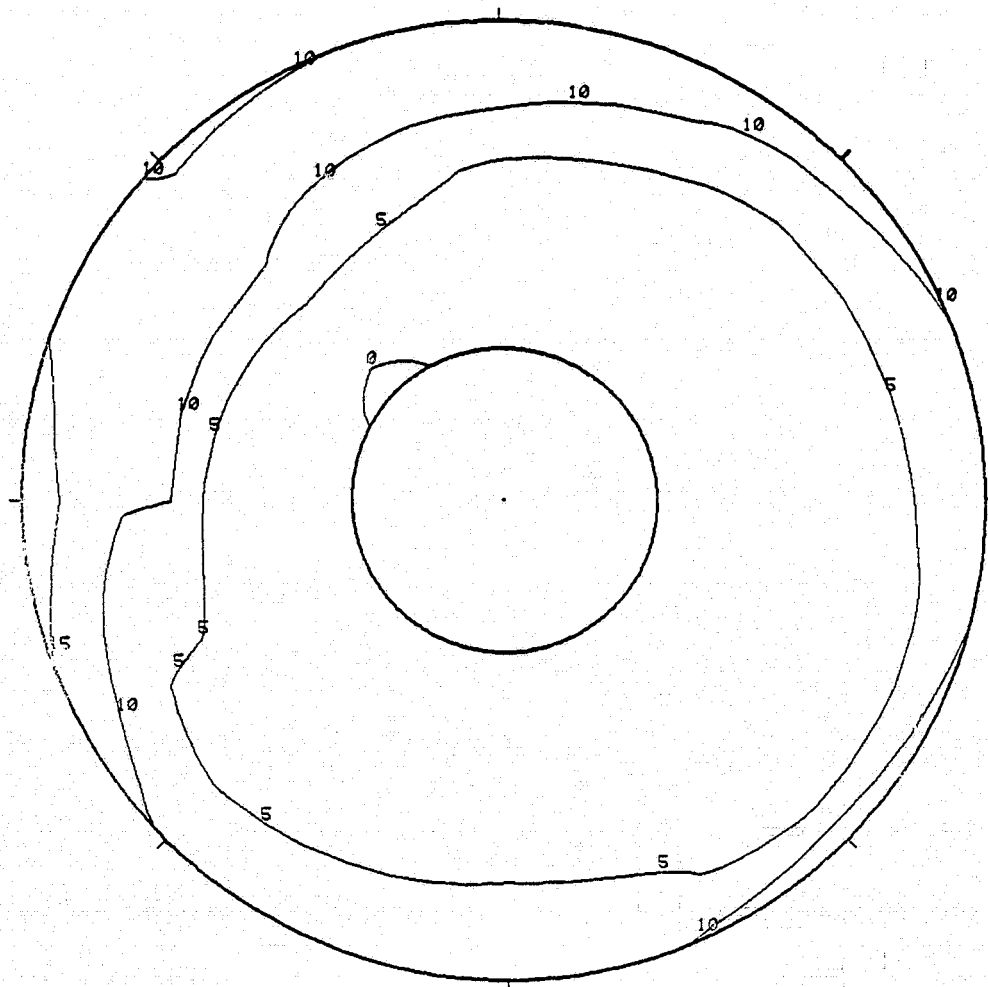
DELTA3
18.7

BYPASS
0.0

WAT2
80.8%

CIVV
-25.0

55(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00567

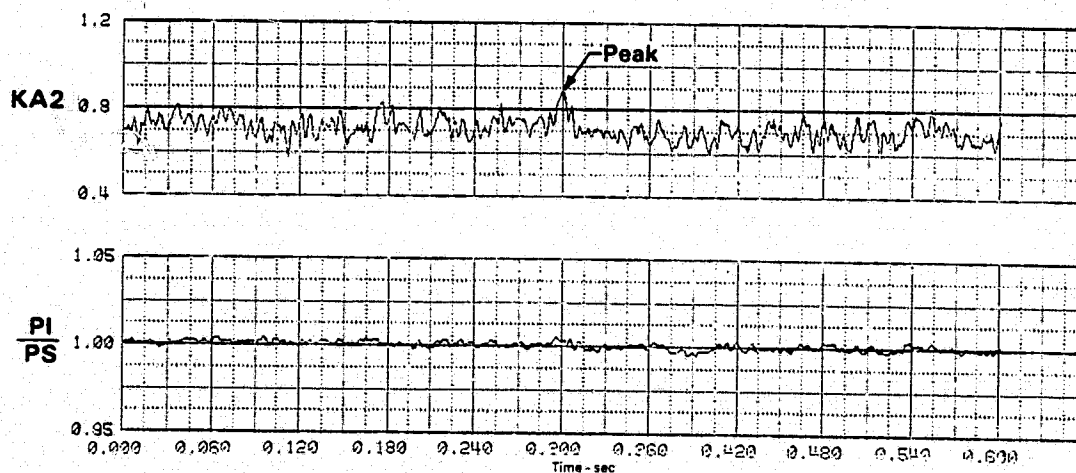
FIGURE G-55 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 80.8 %

FSE - NASA DATA STUDY

DATA PART/POINT 528 / 2 IDENT. 55
THE SEGMENT START TIME WAS AT 3:40:36.422

MACH 1.8	ALPHA 4	BETA 0	RHO 2.5	DELTA3 18.7	BYPASS 0.0	WAT2 80.8%	CIVV -25.0
PI 44.53 (6.459)	PI/PS 1.003	KTHETA 0.111	KRA2 0.215	BKRA2 0.784	KA2 0.855	KC2 0.070	KOSP 0.065
							D2 0.060

55(I) Time History Plots 170 Hz



PEAK AT TIME = 0.299714 SECONDS

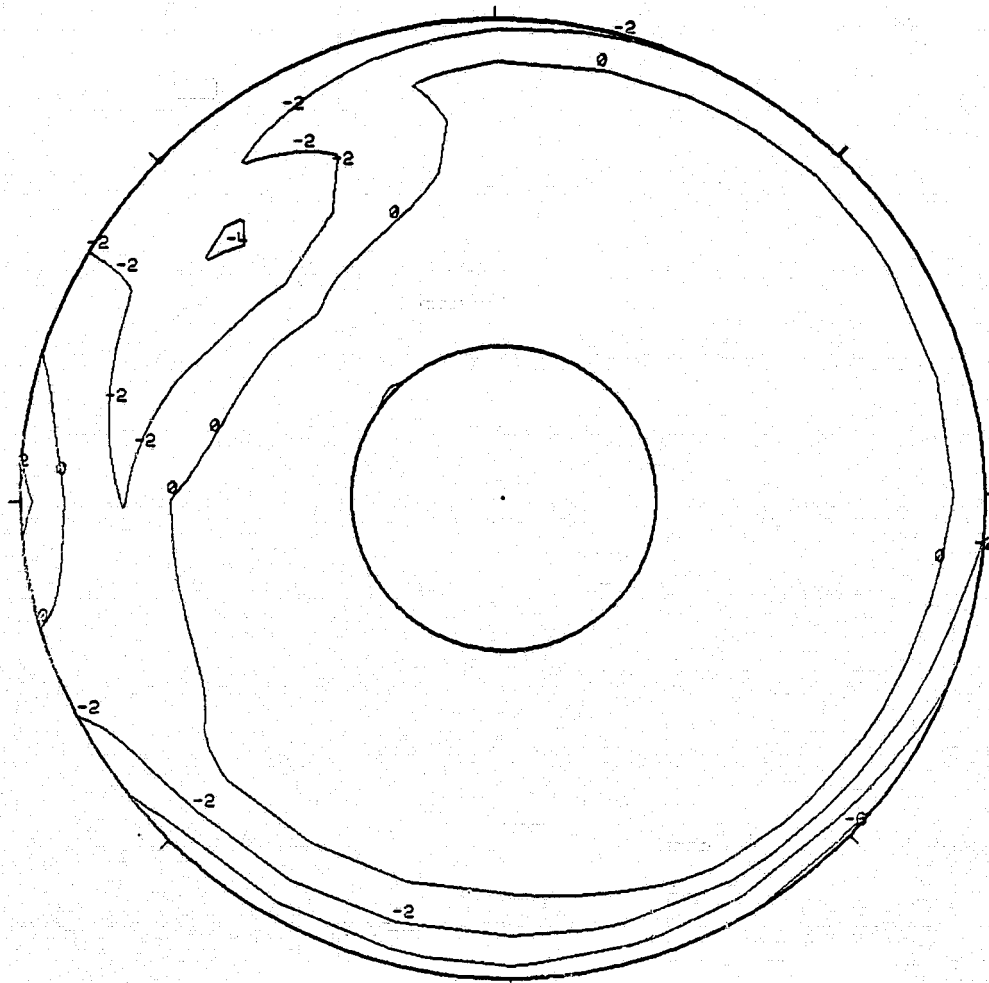
FIGURE G-55 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8, \alpha = 4.0, \beta = 0.0, WAT2 = 80.8\%$

FSE - NASA DATA STUDY

DATA PART/POINT 528 / 2 IDENT. 55
THE SEGMENT START TIME WAS AT 3:40:36.422

MACH 1.8	ALPHA 4	BETA 0	RHO 2.5	DELTA3 18.7	BYPASS 0.0	WAT2 80.8%	CIVV -25.0
PI 44.53 (6.459)	PI/PS 1.003	KTHETA 0.111	KRA2 0.215	BKRA2 0.784	KA2 0.895	KC2 0.070	KOSP 0.065
							D2 0.060

55(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 44.53 kPa (6.459 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.299714 SECONDS

FIGURE G-55 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 80.8 %

FSE - NASA Data Study
 Part/Point - 529/4, Ident 56
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00

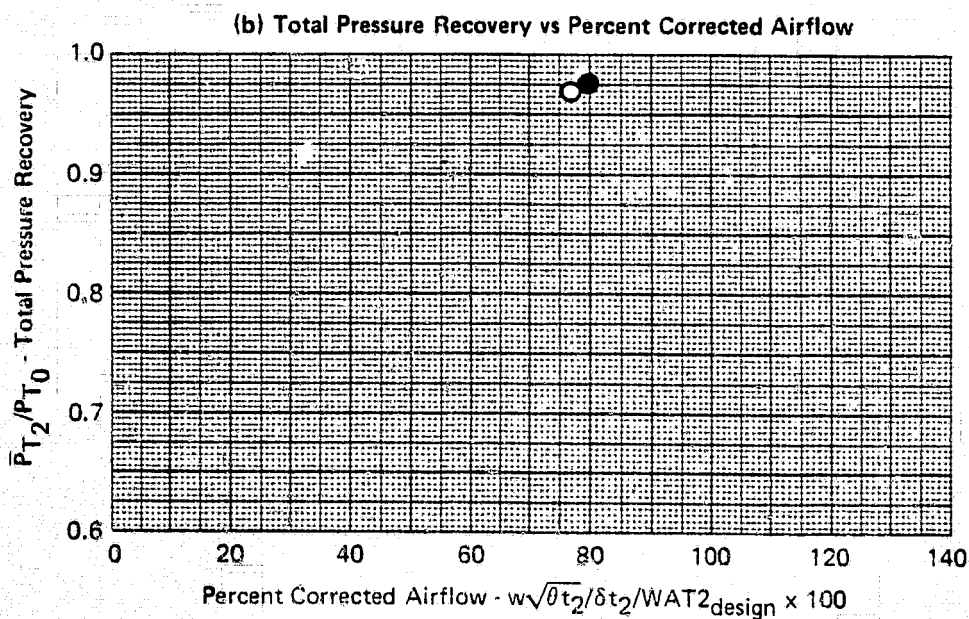
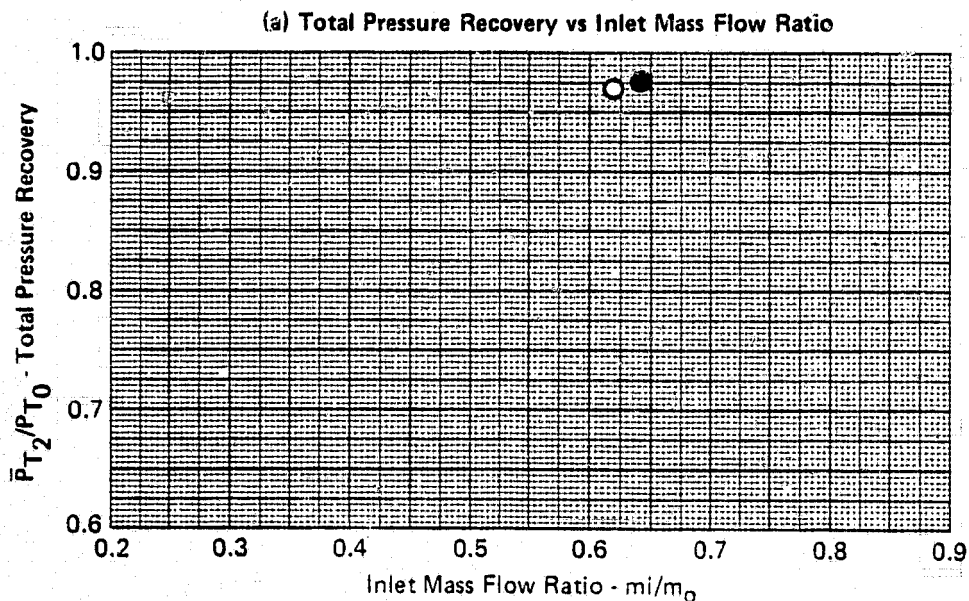
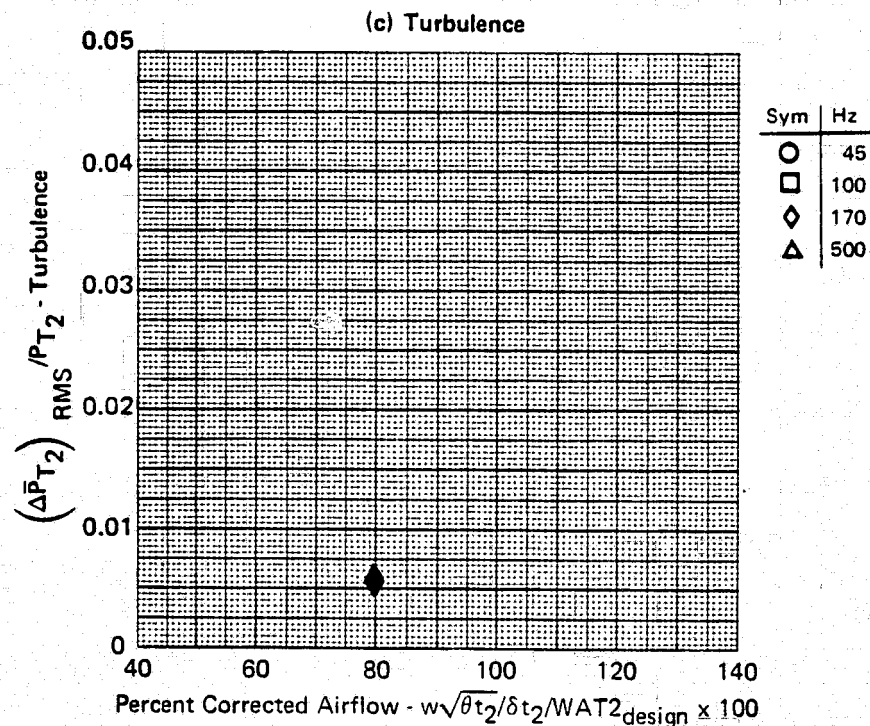


FIGURE G-56
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 79.7\%$

GP77-0658-1

FSE - NASA Data Study
 Part/Point - 529/4, Ident 56
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00



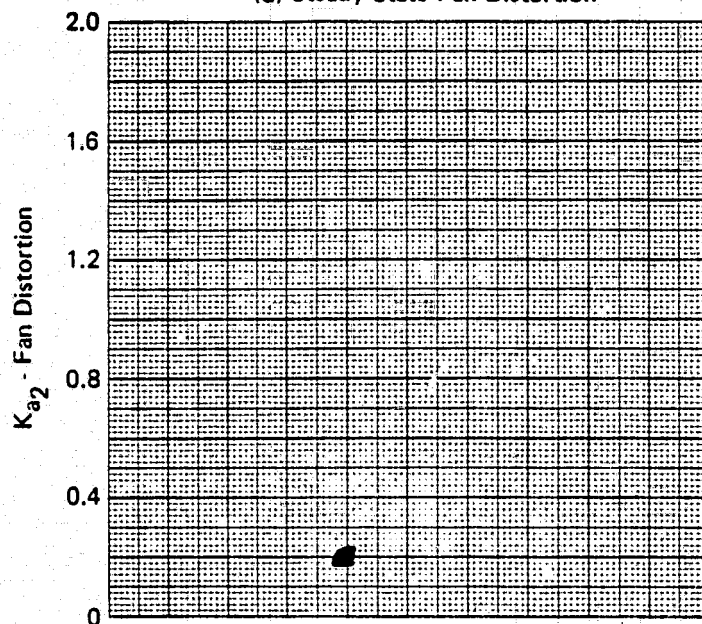
GP77-0658-5

FIGURE G-56 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 79.7\%$

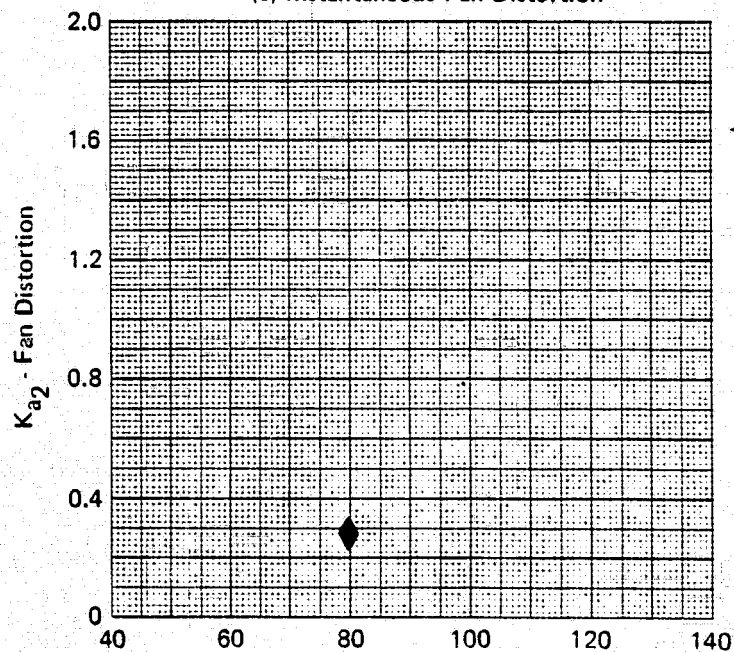
0.8

FSE - NASA Data Study
 Part/Point - 529/4, Ident 56
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion



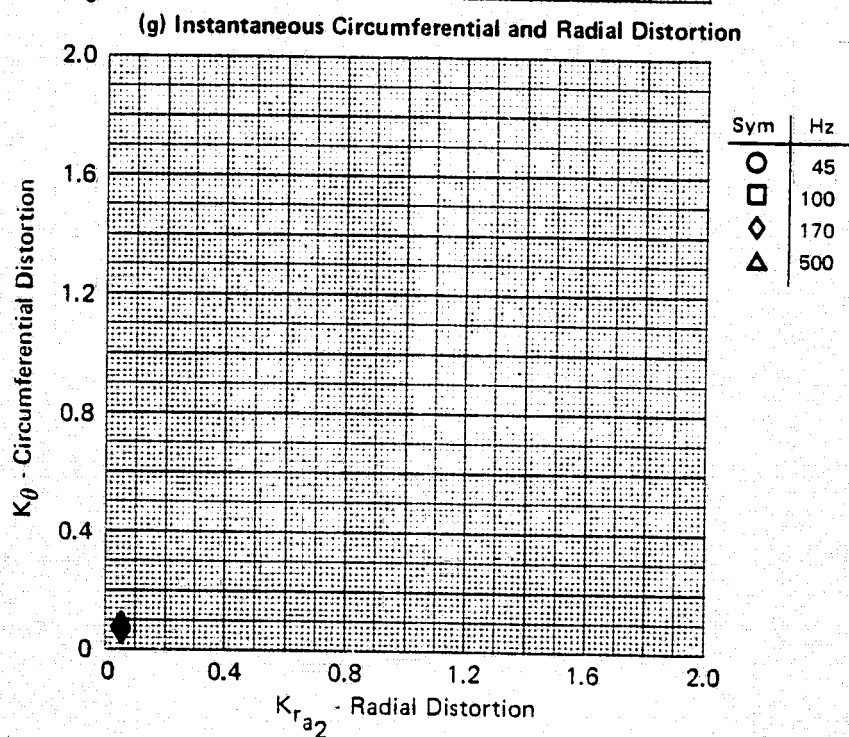
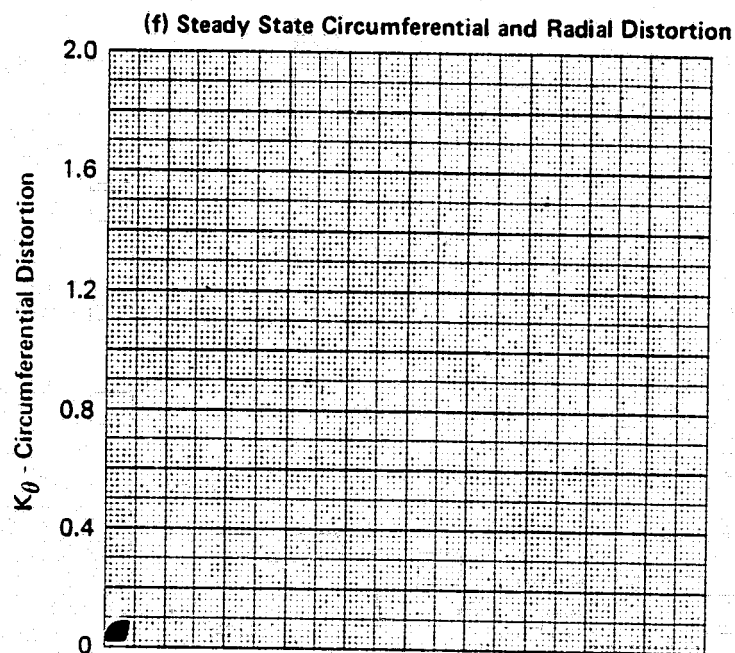
Sym	Hz
○	45
□	100
◇	170
△	500

Percent Corrected Airflow - $W \sqrt{\theta} t_2 / \delta t_2 / WAT2_{design} \times 100$

GP77-0658-3

FIGURE G-56 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 79.7\%$

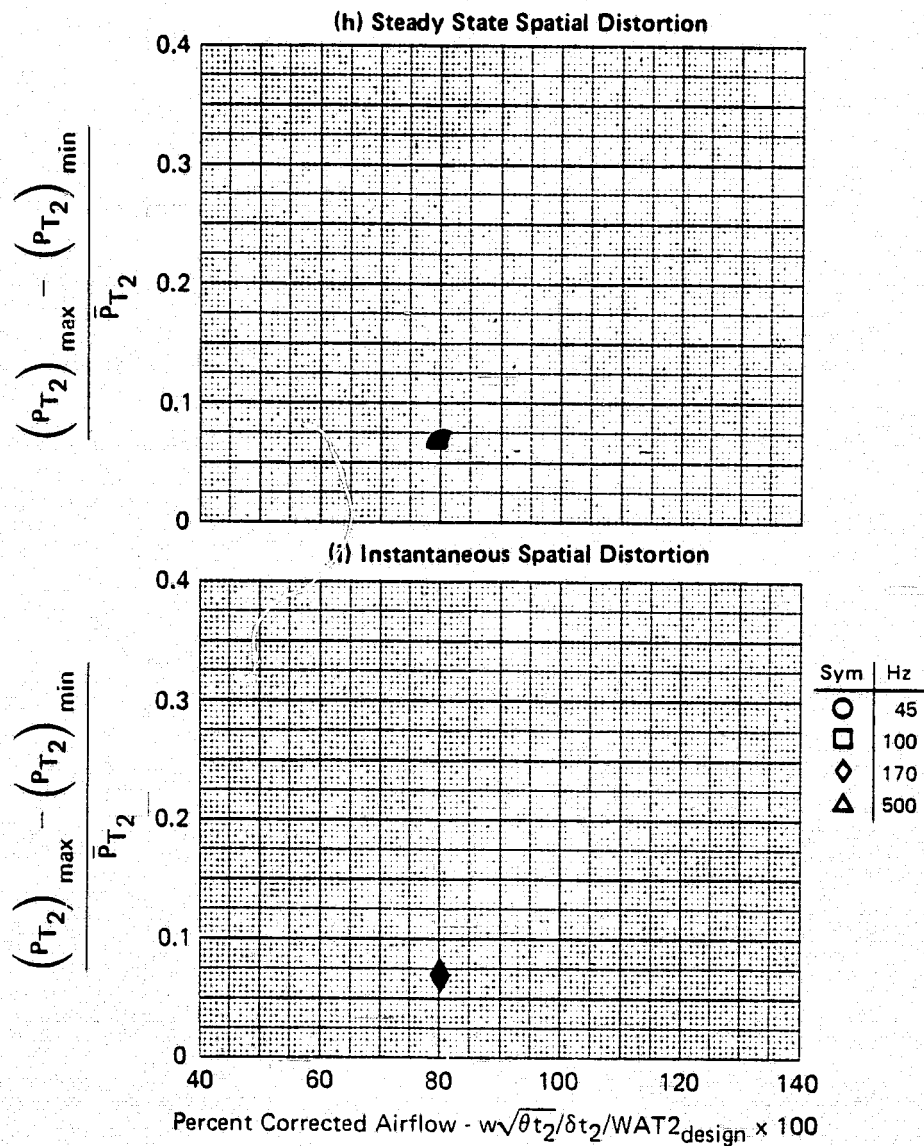
FSE - NASA Data Study
 Part/Point - 529/4, Ident 56
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00



GP77-0658-2

FIGURE G-56 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 79.7\%$

FSE - NASA Data Study
 Part/Point - 529/4, Ident 56
 RHO DELTA3 BYPASS CIVV
 2.5 18.7 0.0 -25.00



GP77-0658-4

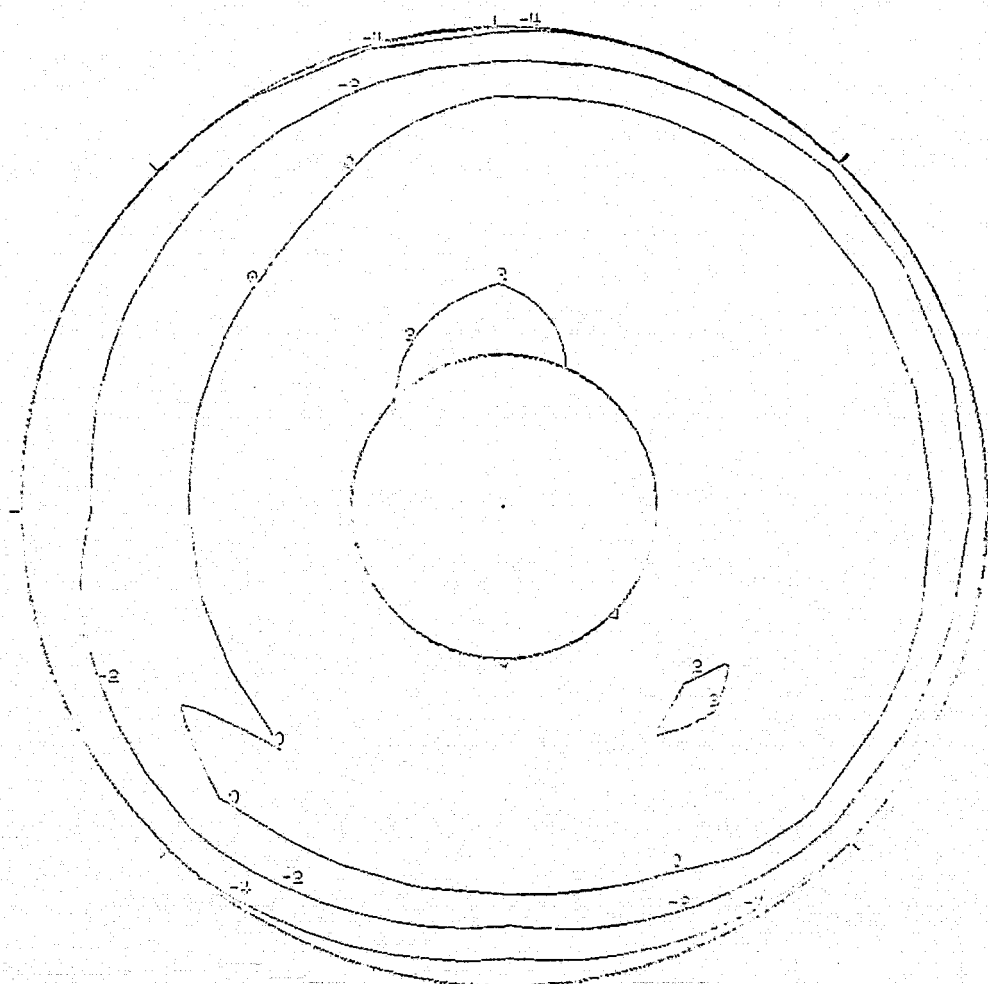
FIGURE G-56 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 79.7\%$

FSE - NASA DATA STUDY

DATA PART/POINT 529 / 4 IDENT. 56
THE SEGMENT START TIME WAS AT 4:25:43.390

MACH 1.8	ALPHA 4	BETA 9	BH2 2.5	DELTA3 18.7	BYPASS 0.0	WAT2 79.7%	CTVV -25.0
PI 44.66 (6.478)	PI/PS 1.000	KTHETA 0.272	KRO2 0.073	SKRO2 1.303	KQ2 0.375	KC2 0.252	KQSP 0.046
							D2 0.070

56 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 44.66 kPa (6.478 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

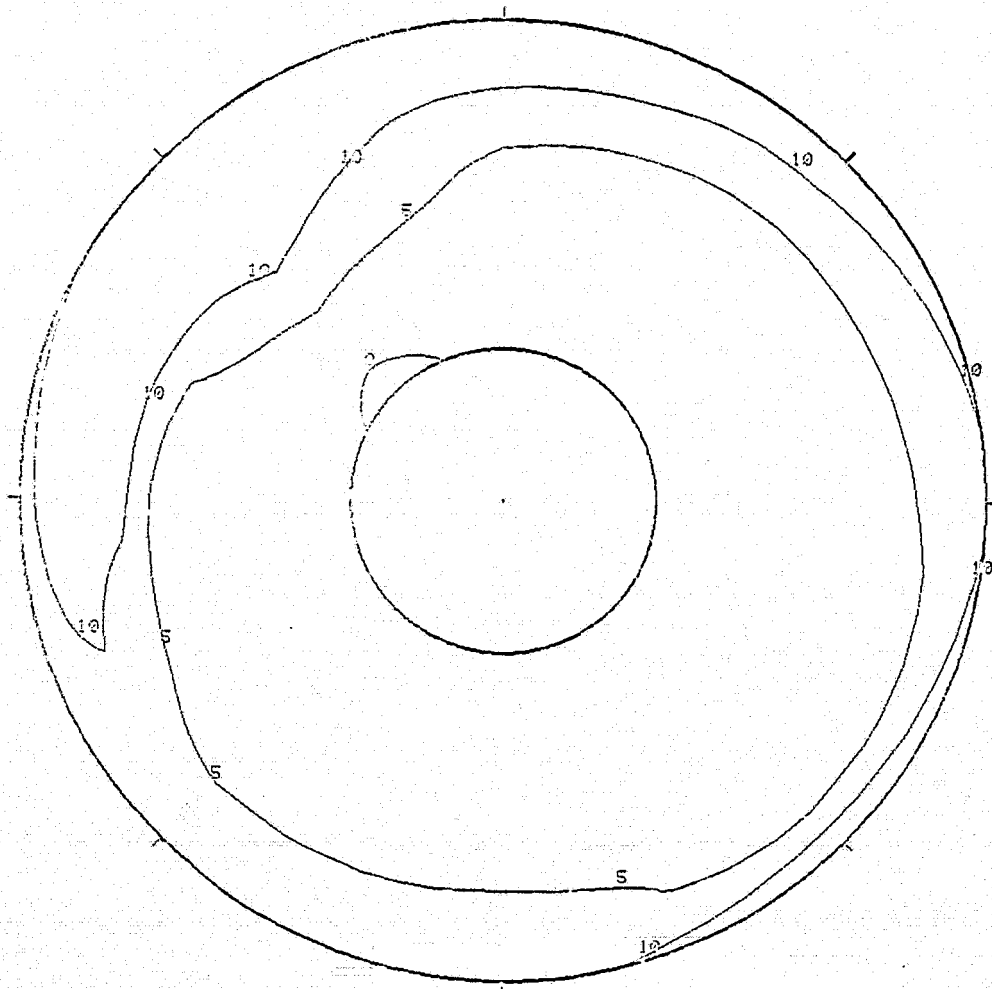
FIGURE G-56 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 79.7 %

FSE - NASA DATA STUDY

DATA PART/POINT 529 / 4 IDENT. 56
THE SEGMENT START TIME WAS AT 4:25:49.000

MACH	ALPHA	BETA	PHI	DELTA	BYPASS	WAT2	CIVV
1.8	4	0	2.5	13.7	0.0	79.7%	-25.0

56(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00545

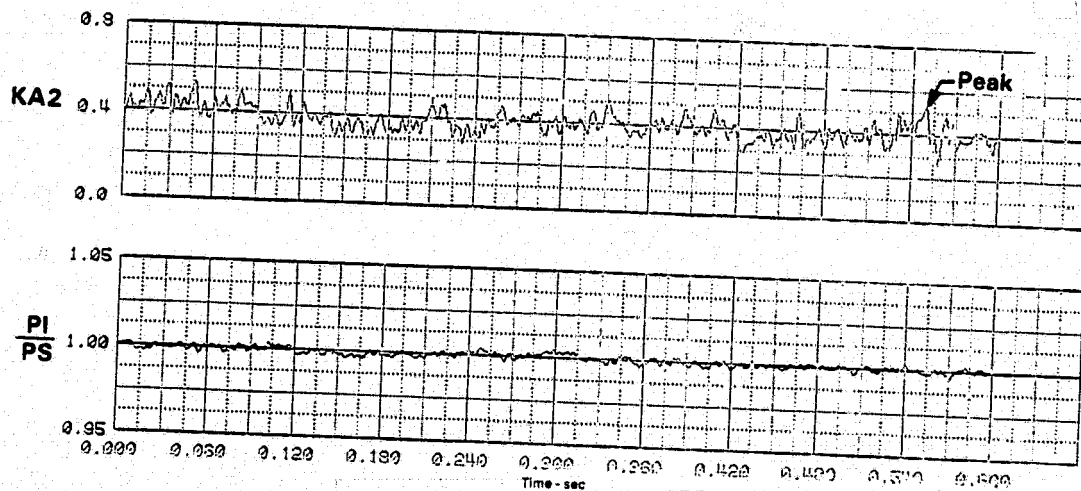
FIGURE G-56 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 79.7\%$

FSE - NASA DATA STUDY

DATA PART/POINT 529 / 4 IDENT. 56
THE SEGMENT START TIME WAS AT 4:25:40.000

MACH 1.8	ALPHA 4	BETA 0	RHO 2.5	DELTA3 18.7	BYPASS 0.0	WAT2 79.7%	CIVV -25.0
PI 44.68 (6.480)	PI/PS 1.000	KTHETA 0.123	KRA2 0.101	SKR22 9.403	KR2 0.531	KC2 0.121	KOSP 0.023
							D2 0.070

56(I) Time History Plots 170 Hz



PEAK AT TIME = 0.549656 SECONDS

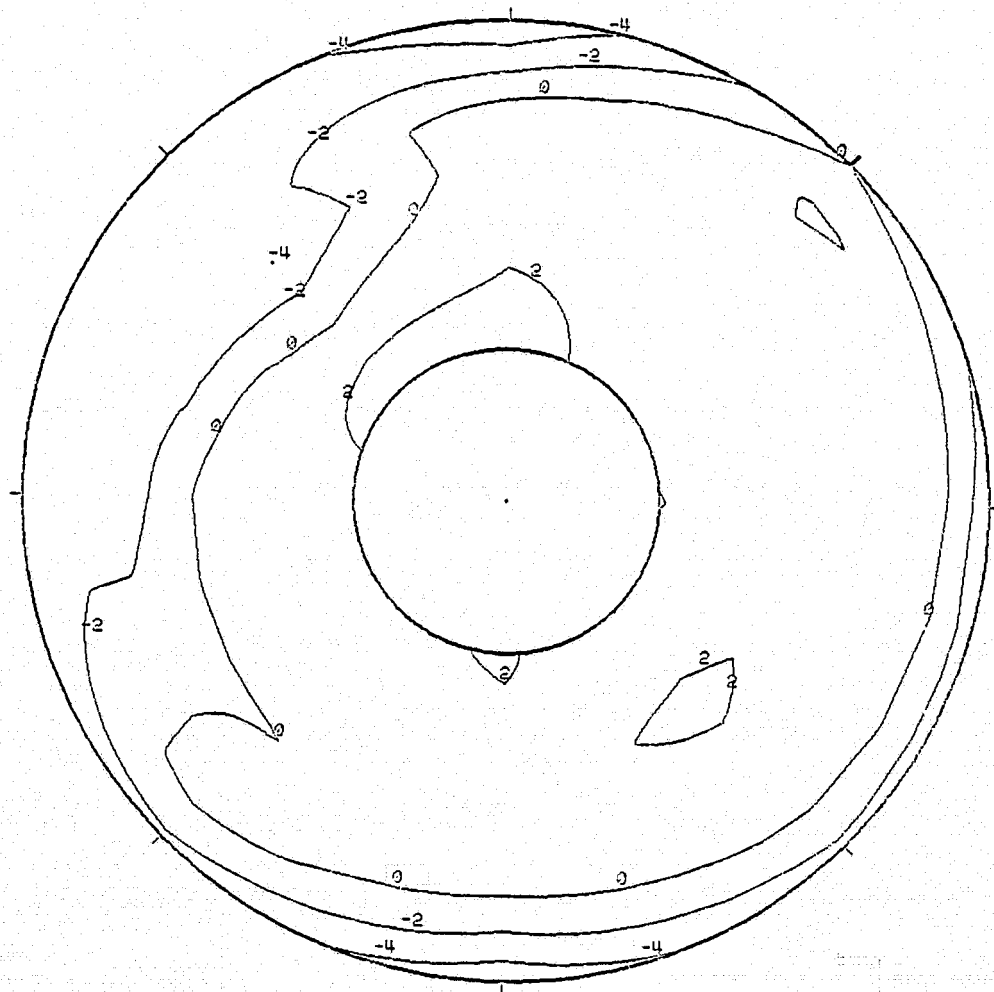
FIGURE G-56 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 79.7\%$

FSE - NASA DATA STUDY

DATA PART/POINT 529 / 4 IDENT. 56
THE SEGMENT START TIME WAS AT 4:25:49.000

MACH 1.8	ALPHA 4	BETA 0	RHO 2.5	DELTA3 18.7	BYPASS 0.0	WAT2 79.7%	CIVV -25.0
P1 44.68 (6.480)	PI/PS 1.000	KTHETA 0.123	KPA2 0.101	SKRA2 0.403	KA2 0.531	KC2 0.121	KOSP 0.023
							D2 0.070

56(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 170 Hz



MEAN FACE PRESSURE = 44.68 kPa (6.480 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.549656 SECONDS

FIGURE G-56 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 1.8$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 79.7%

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FLIGHT - NASA Data Study
 Part/Point - 425/2, Ident 57
 RHO DELTA3 BYPASS CIVV
 2.3 20.9 0.089(138.2) -25.00

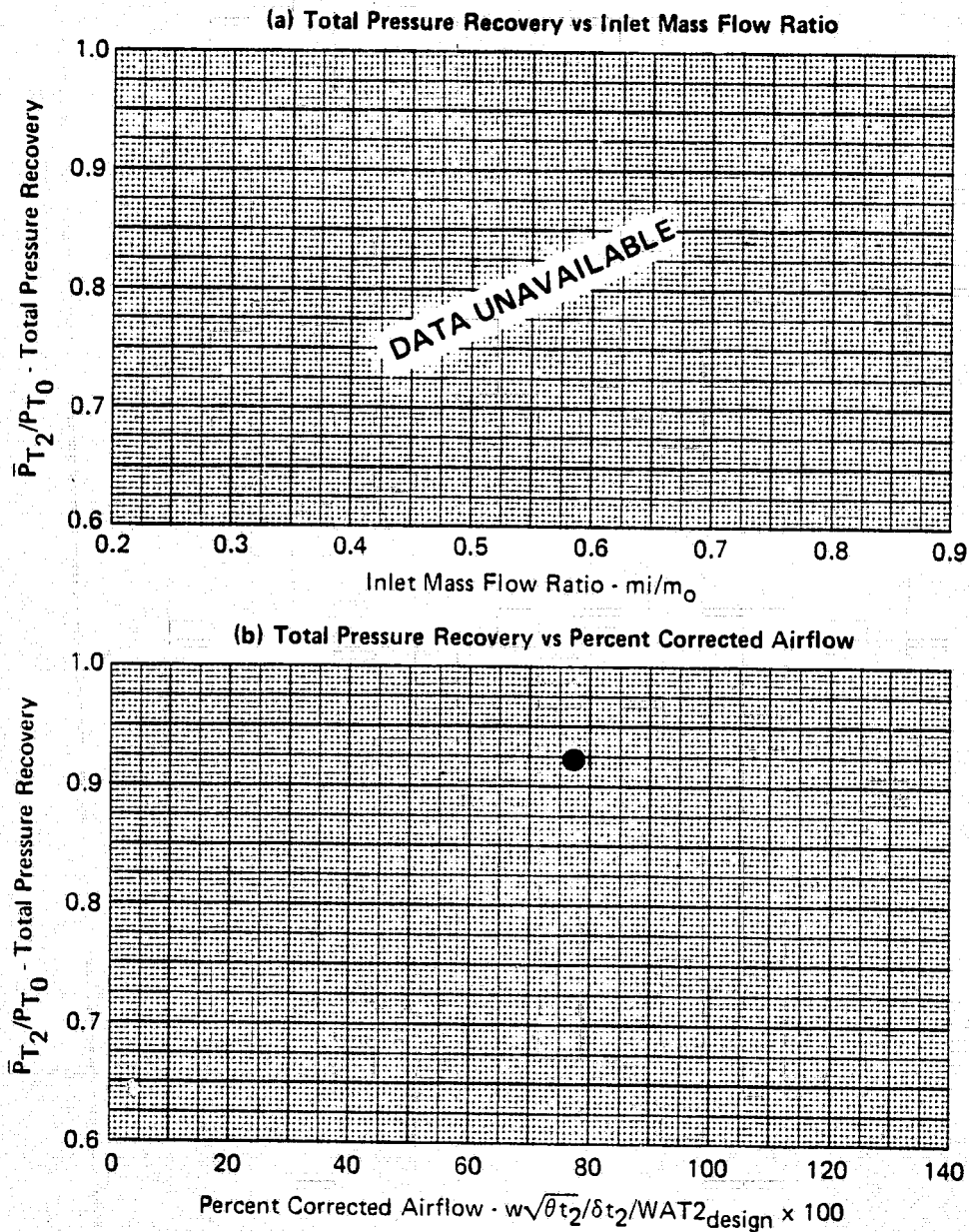
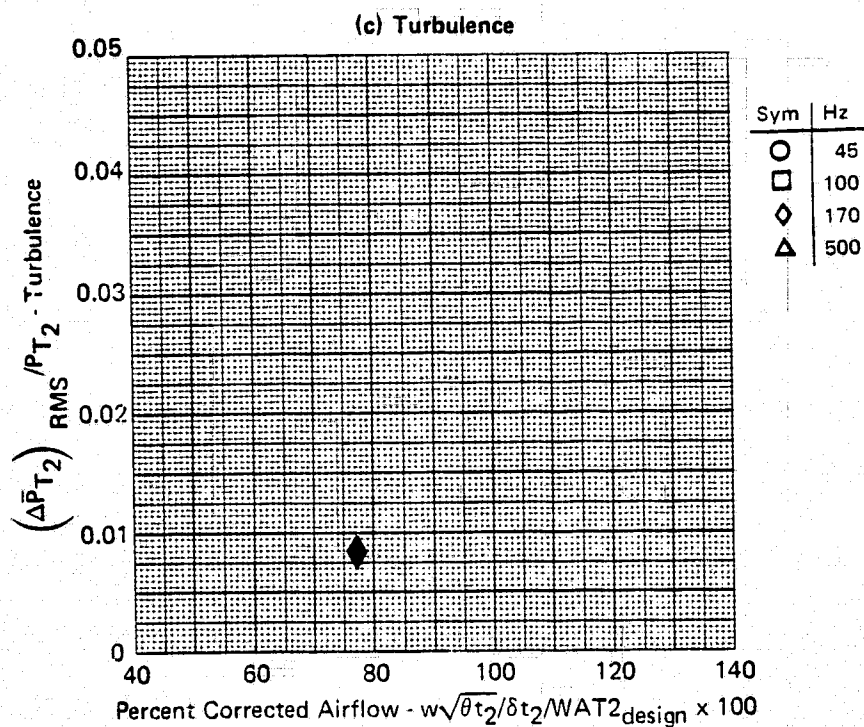


FIGURE G-57
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.0$, $\alpha = 2.5$, $\beta = 0.2$, $WAT2 = 77.0\%$

GP77-0658-1

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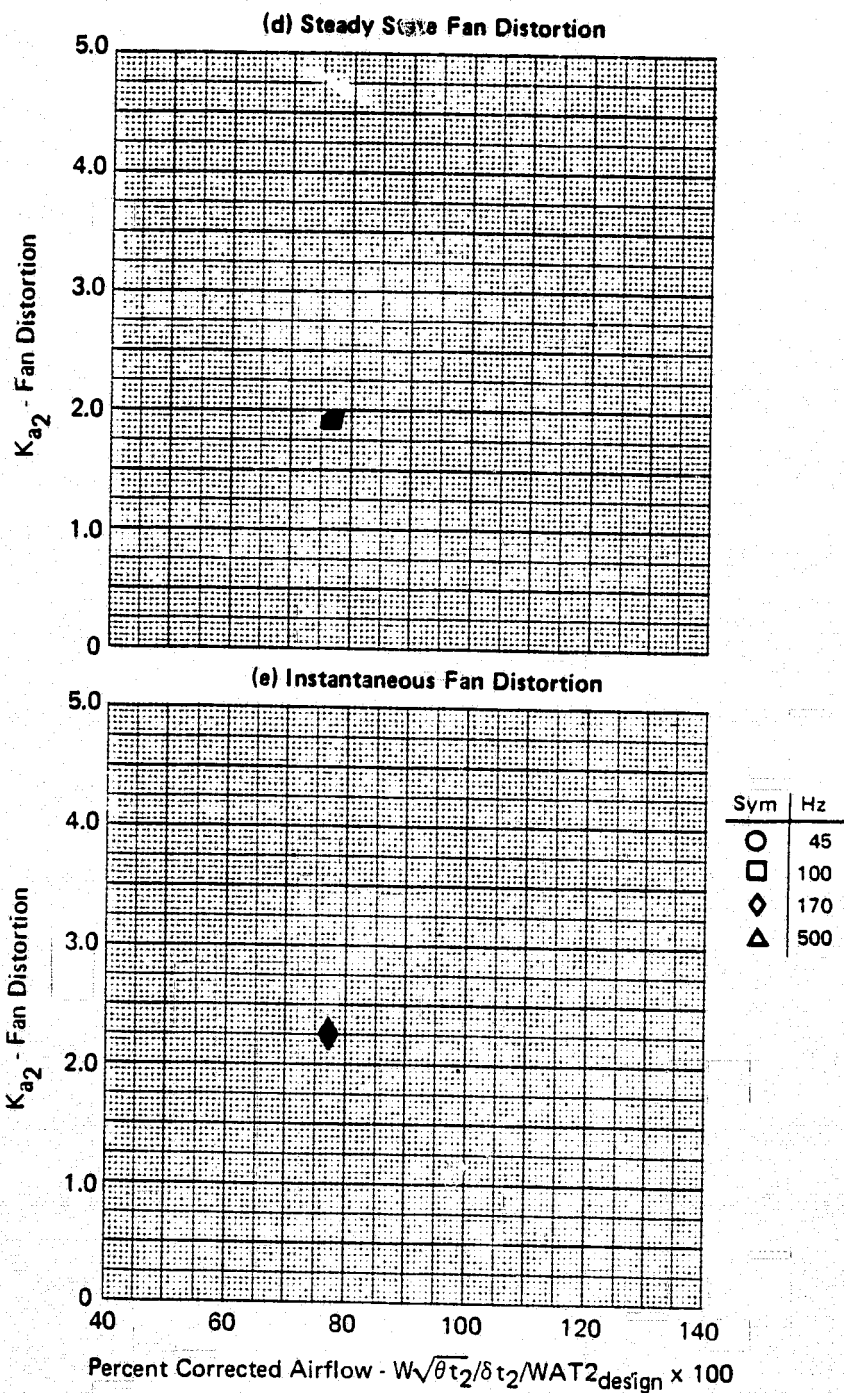
FLIGHT - NASA Data Study
 Part/Point - 425/2, Ident 57
 RHO DELTA3 BYPASS CIVV
 2.3 20.9 0.089(138.2) -25.00



GP77-0658-5

FIGURE G-57 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.0$, $\alpha = 2.5$, $\beta = 0.2$, $WAT2 = 77.0\%$

FLIGHT - NASA Data Study
 Part/Point - 425/2, Ident 57
 RHO DELTA3 BYPASS CIVV
 2.3 20.9 0.089(138.2) -25.00



GP77-0658-3

FIGURE G-57 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.0$, $\alpha = 2.5$, $\beta = 0.2$, $WAT2 = 77.0\%$

FLIGHT - NASA Data Study
 Part/Point - 425/2, Ident 57
 RHO DELTA3 BYPASS CIVV
 2.3 20.9 0.089(138.2) -25.00

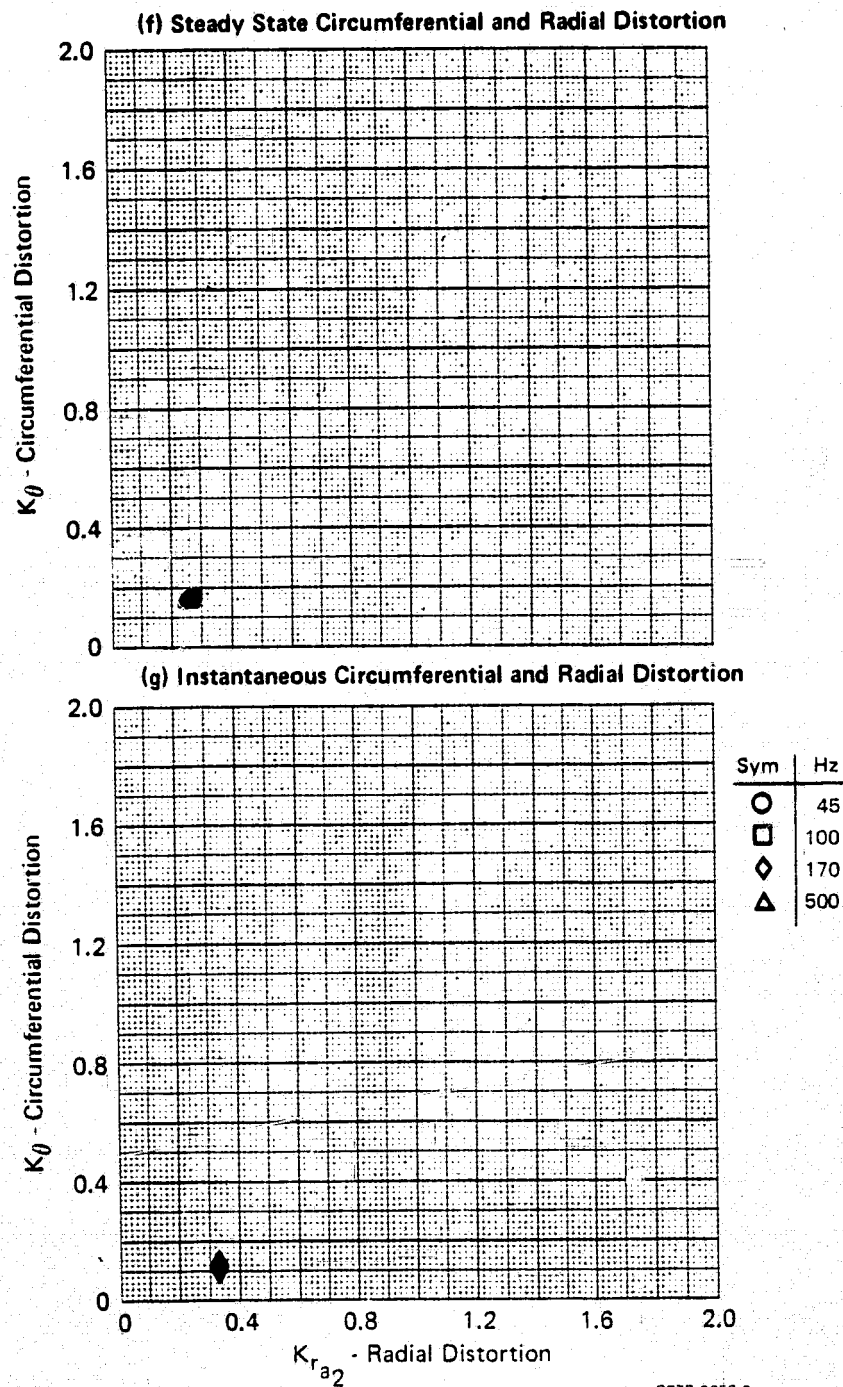
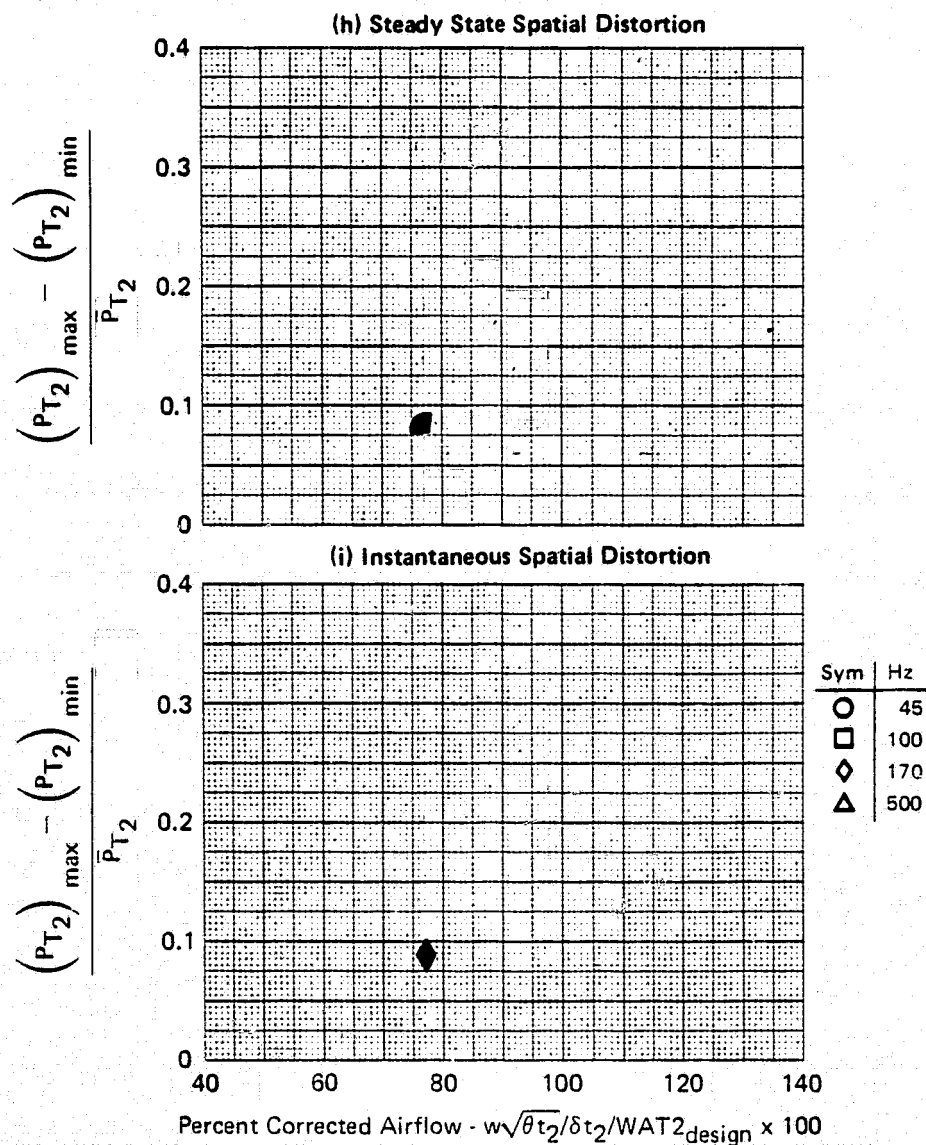


FIGURE G-57 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.0$, $\alpha = 2.5$, $\beta = 0.2$, WAT2 = 77.0 %

FLIGHT - NASA Data Study
 Part/Point - 425/2, Ident 57
 RHO DELTA3 BYPASS CIVV
 2.3 20.9 0.089(138.2) -25.00



GP77-0658-4

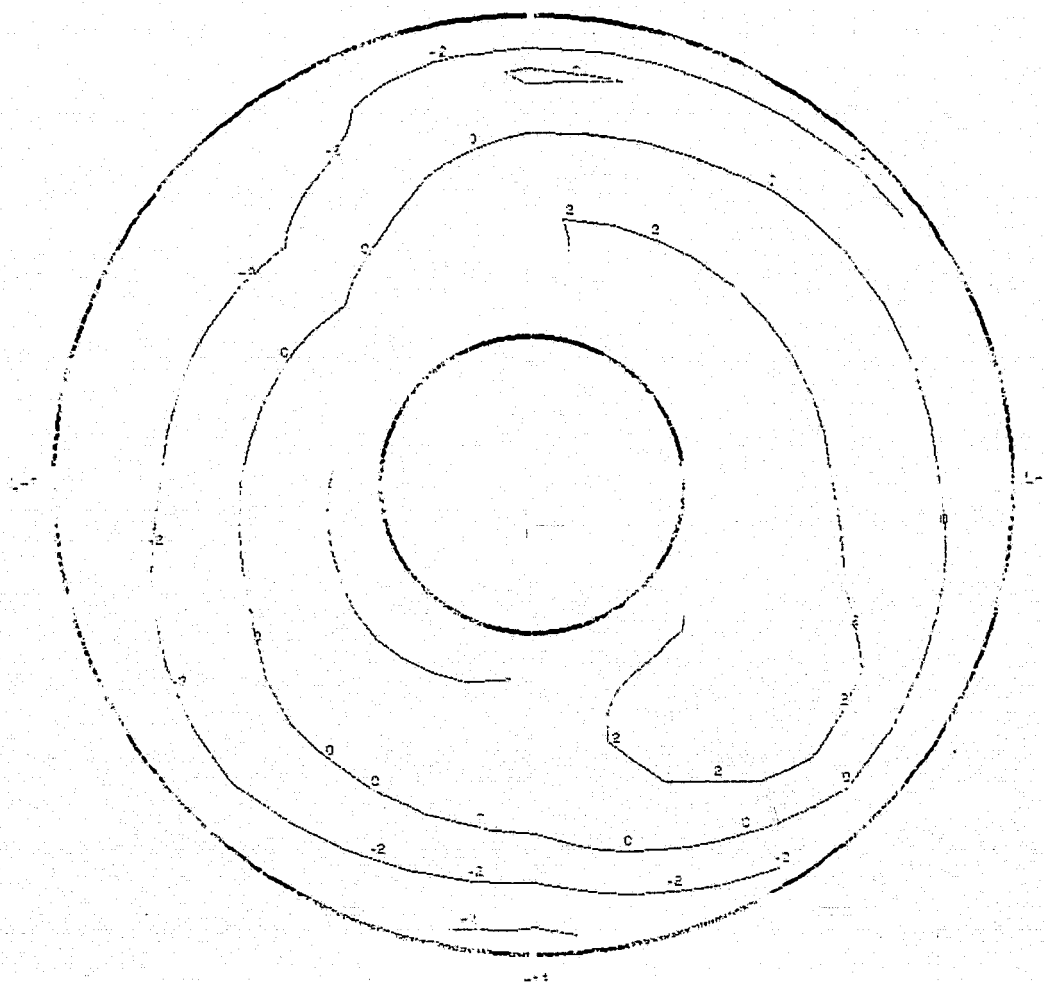
FIGURE G-57 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.0, \alpha = 2.5, \beta = 0.2, WAT2 = 77.0 \%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/2 IDENT. 57
THE SEGMENT START TIME WAS AT 05:11:14.142

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	QMPY
2.0	2.5	0.2	17664(57953)	2.3	20.9	0.08916 (138.2)	77.0%	-25.00
PI	PI/PS	KTHETA	KRA2	8KRA2	KA2	KC2	KQSP	D2
57.58 (8.351)	1.0	.1545	.2707	1.7601	1.9168	.1103	—	.0816

57 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 57.58 kPa (8.351 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

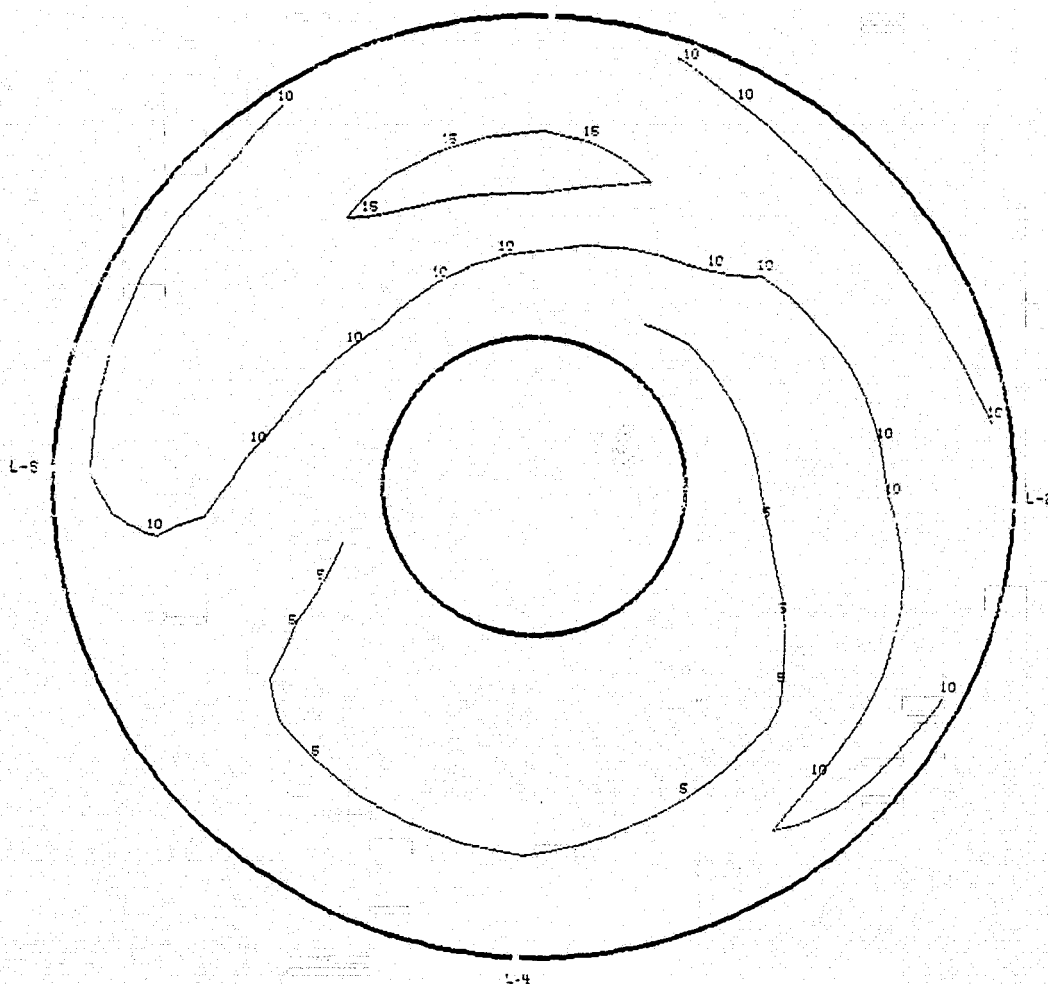
FIGURE G-57 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.0$, $\alpha = 2.5$, $\beta = 0.2$, $WAT2 = 77.0$ %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/2 IDENT. 57
THE SEGMENT START TIME WAS AT 08:11:14.142

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.0	2.5	0.2	17864(57953)	2.3	20.9	0.08916 (138.2)	77.0%	-25.00

57(k) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0084

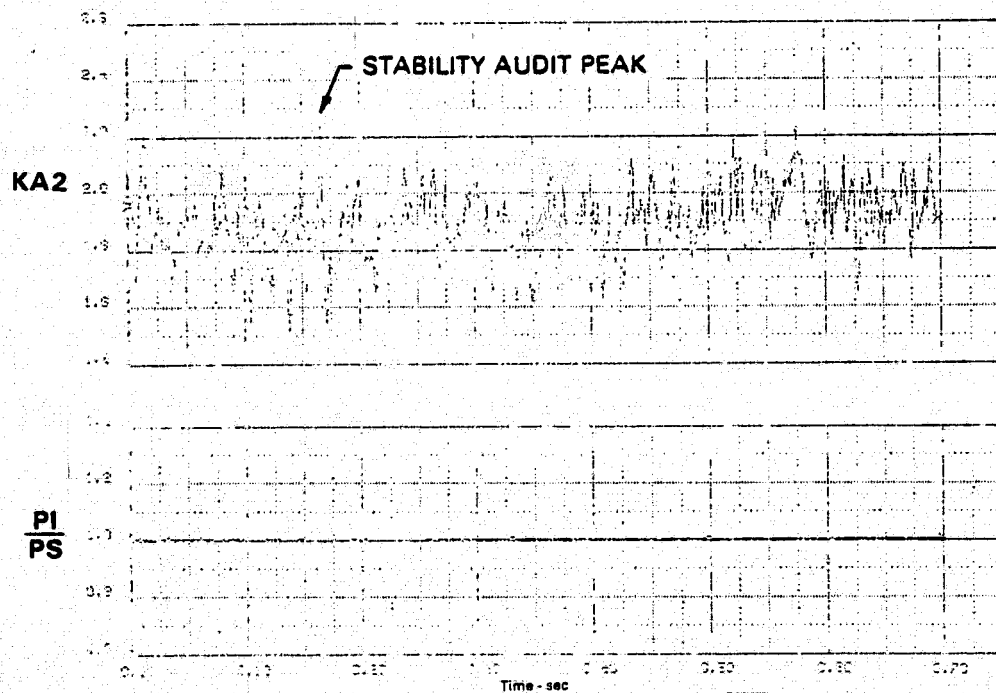
FIGURE G-57 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.0$, $\alpha = 2.5$, $\beta = 0.2$, $WAT2 = 77.0\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/2 IDENT. 57
THE SEGMENT START TIME WAS AT 05:11:14.142

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.0	2.5	0.2	17665(57957)	2.3	20.9	0.08916 (138.2)	77.0%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	K6SP	D2
57.30(8.31)	.9972	.1193	.3309	2.1515	2.2709	.1370	.1087	.0886

57(I) Time History Plots 170 Hz



STABILITY AUDIT PEAK AT TIME = .16556 SECONDS

FIGURE G-57 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.0$, $\alpha = 2.5$, $\beta = 0.2$, WAT2 = 77.0 %

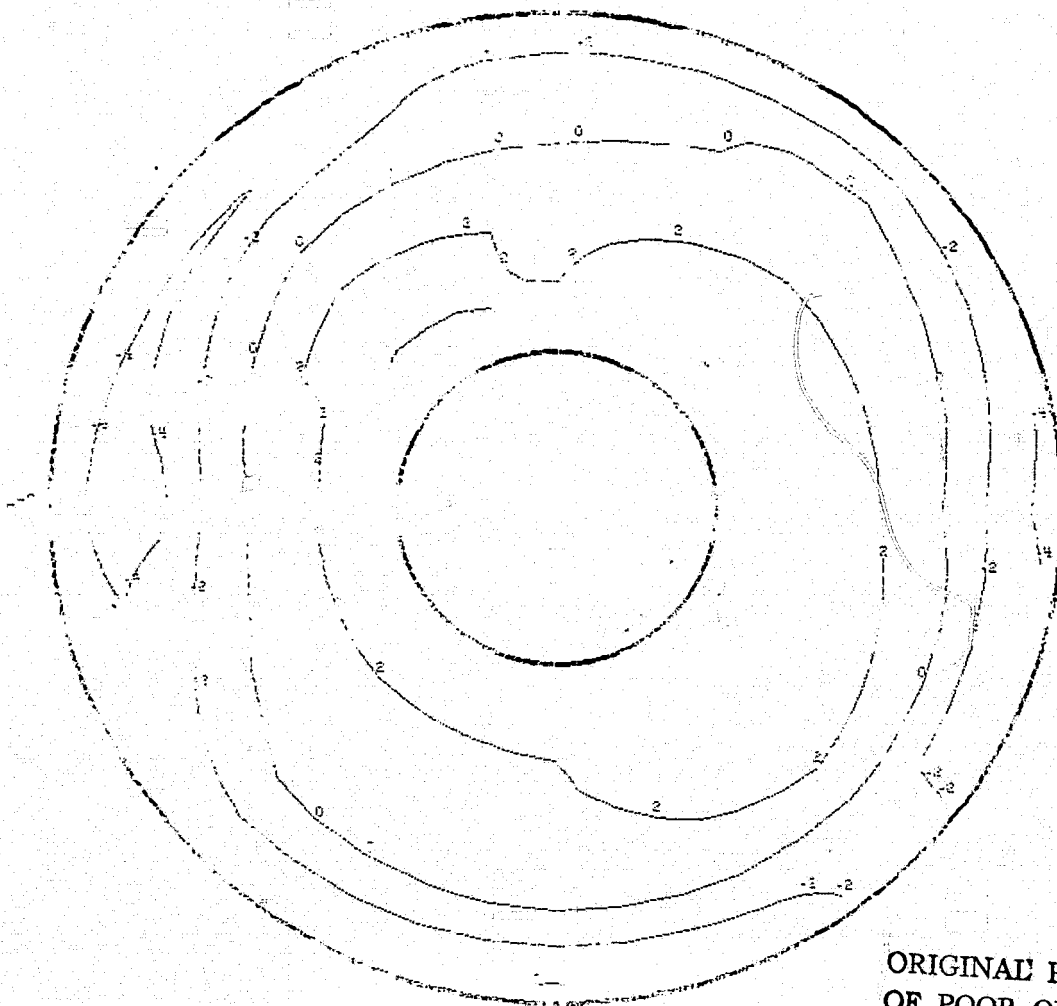
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/2 IDENT. 57
THE SEGMENT START TIME WAS AT 05:11:14.142

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.0	2.5	0.2	17665(57957)	2.3	20.9	0.08916 (138.2)	77.0%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
57.30(8.31)	.9972	.1193	.3309	2.1515	2.2709	.1370	.1087	.0886

57(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



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MEAN FACE PRESSURE = 57.30 kPa (8.310 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.16556 SECONDS

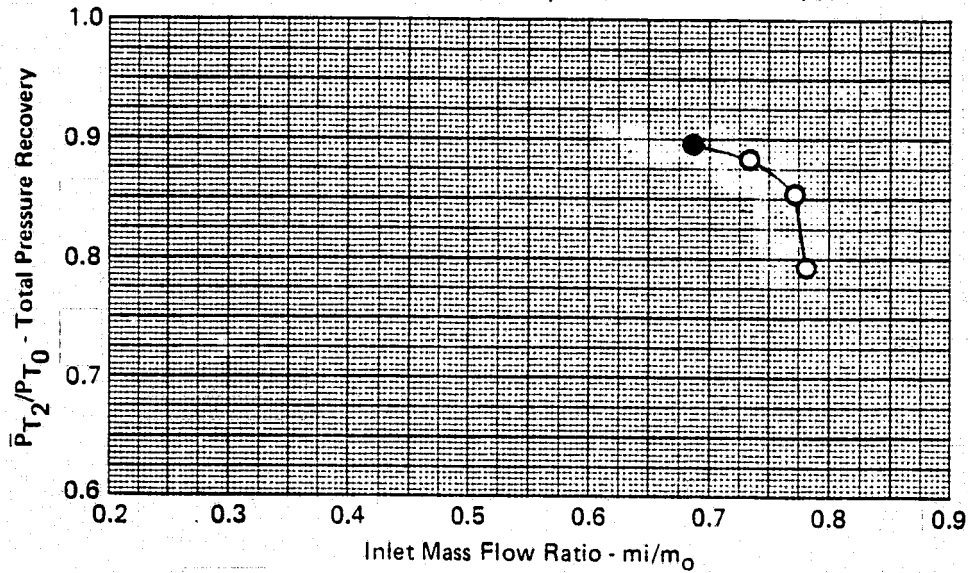
FIGURE G-57 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.0$, $\alpha = 2.5$, $\beta = 0.2$, WAT2 = 77.0 %

SERIES VIII - NASA Data Study

Part/Point - 250/7, Ident 58

RHO	DELTA3	BYPASS	CIVV
-4.0	22.5	0.0	-25.00

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



(b) Total Pressure Recovery vs Percent Corrected Airflow

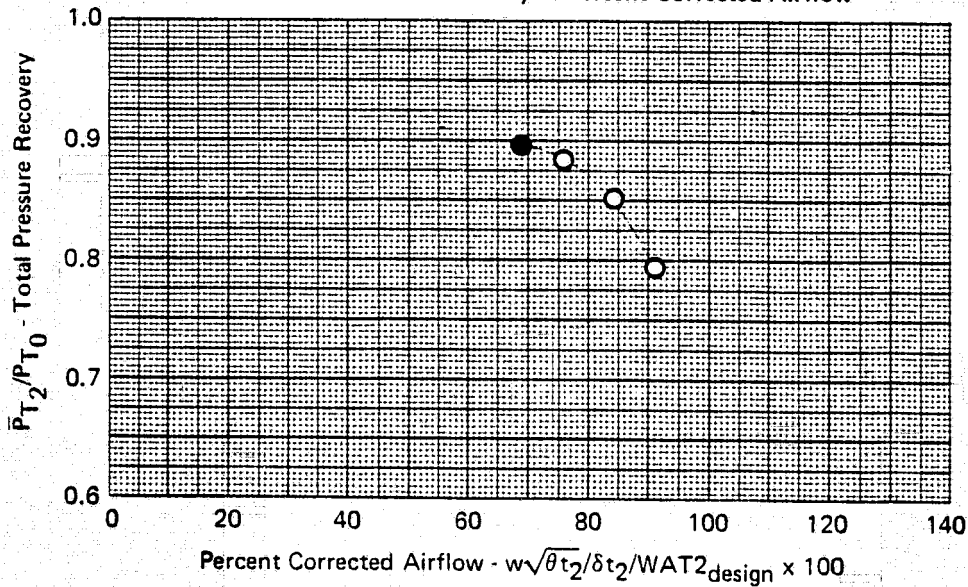


FIGURE G-58

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 68.6\%$

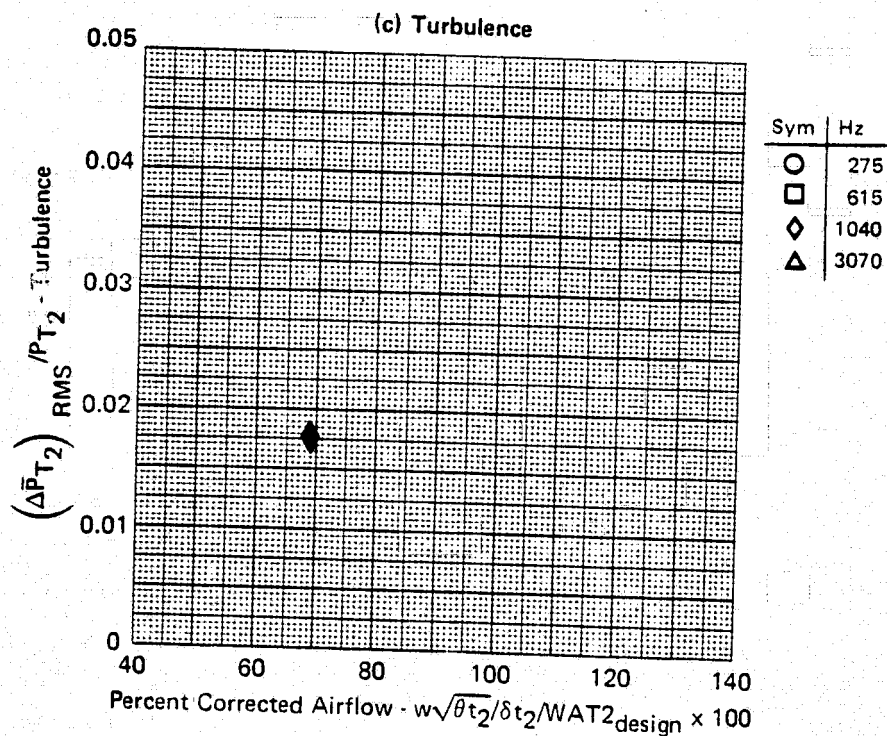
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SERIES VIII - NASA Data Study

Part/Point - 250/7, Ident 58

RHO DELTA3 BYPASS CIVV
-4.0 22.5 0.0 -25.00



GP77-0658-5

FIGURE G-58 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 68.6\%$

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SERIES VIII - NASA Data Study
Part/Point - 250/7, Ident 58

RHO DELTA3 BYPASS CIVV
-4.0 22.5 0.0 -25.00

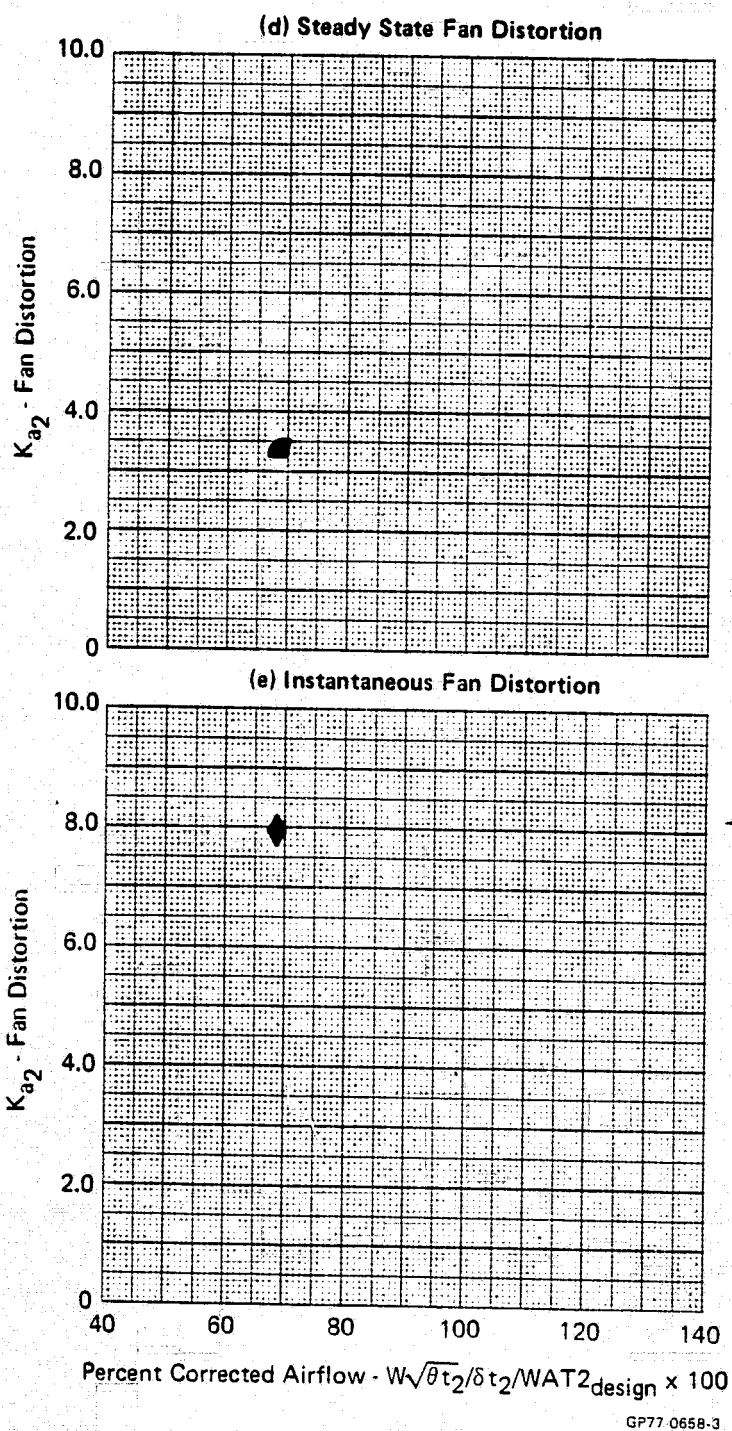
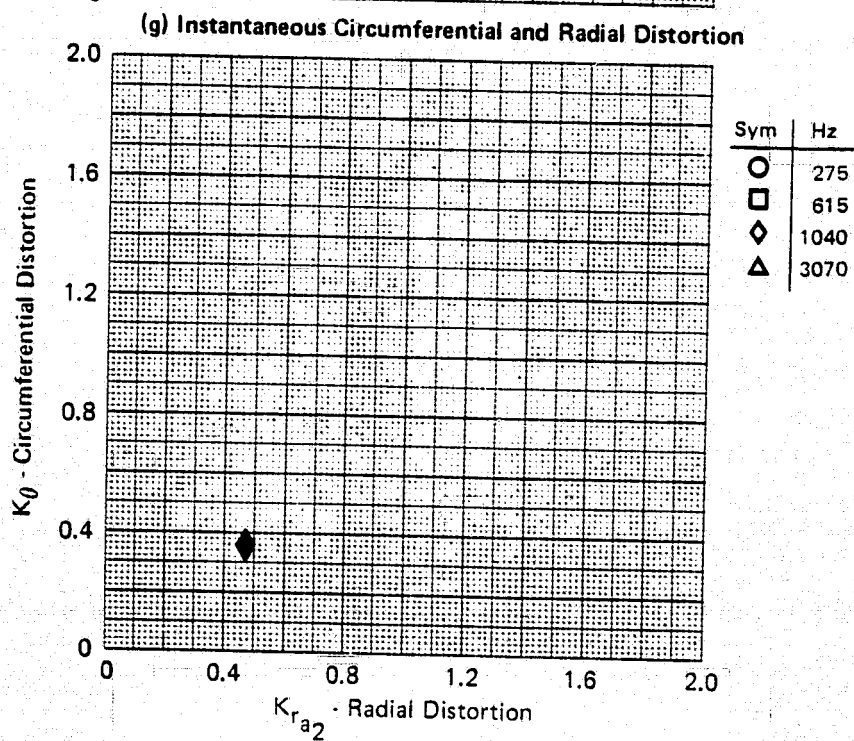
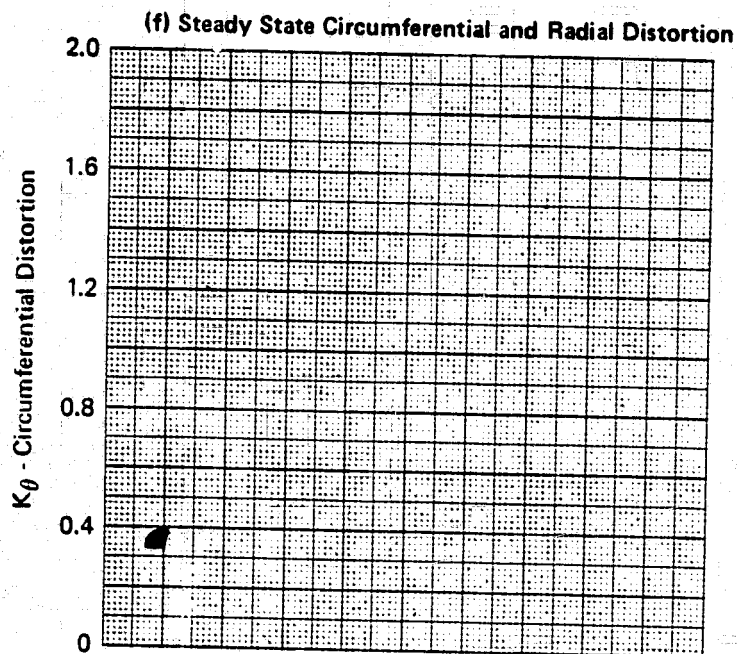


FIGURE G-58 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 68.6\%$

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SERIES VIII - NASA Data Study
 Part/Point - 250/7, Ident 58
 RHO DELTA3 BYPASS CIVV
 -4.0 22.5 0.0 -25.00



GP77-0658-2

FIGURE G-58 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 68.6\%$

SERIES VIII - NASA Data Study
 Part/Point - 250/7, Ident 58
 RHO DELTA3 BYPASS CIVV
 -4.0 22.5 0.0 -25.00

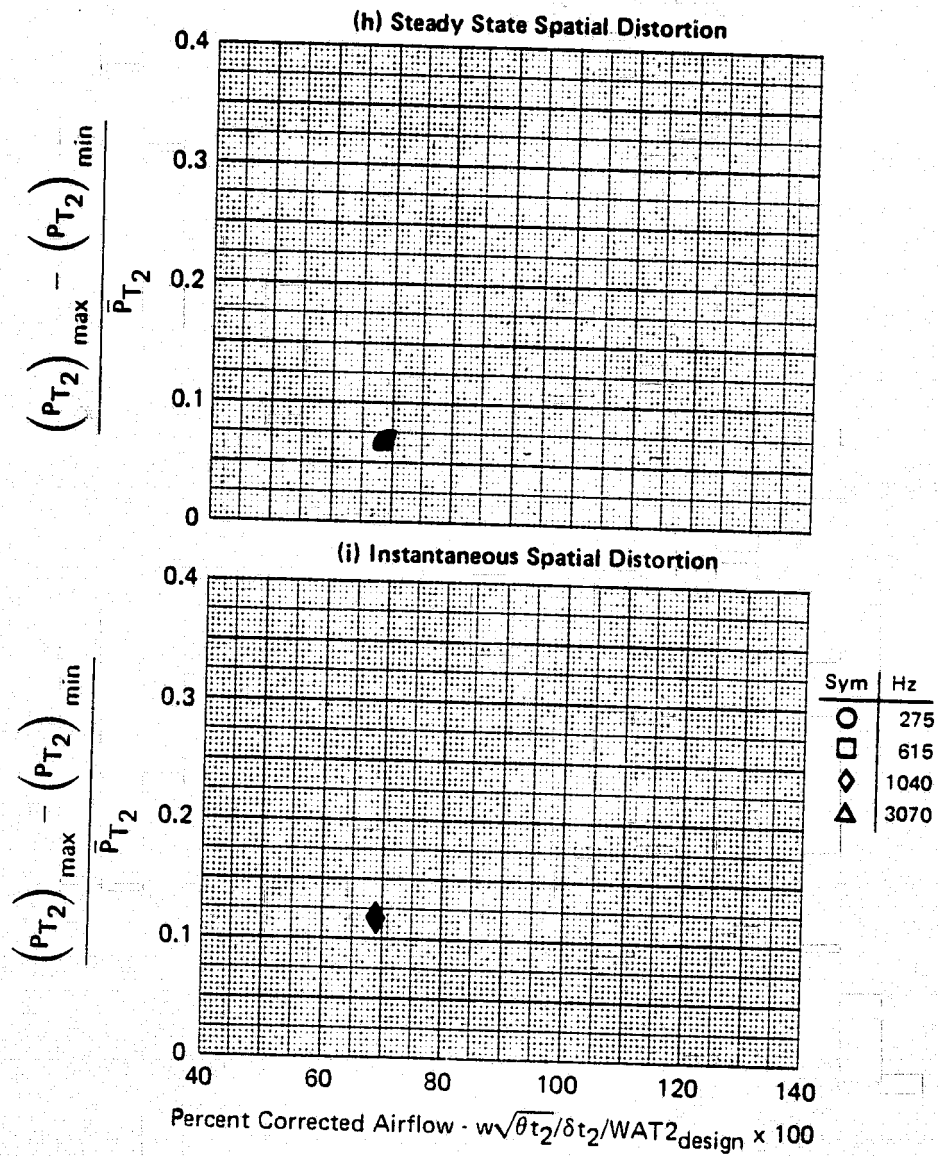


FIGURE G-58 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 68.6\%$

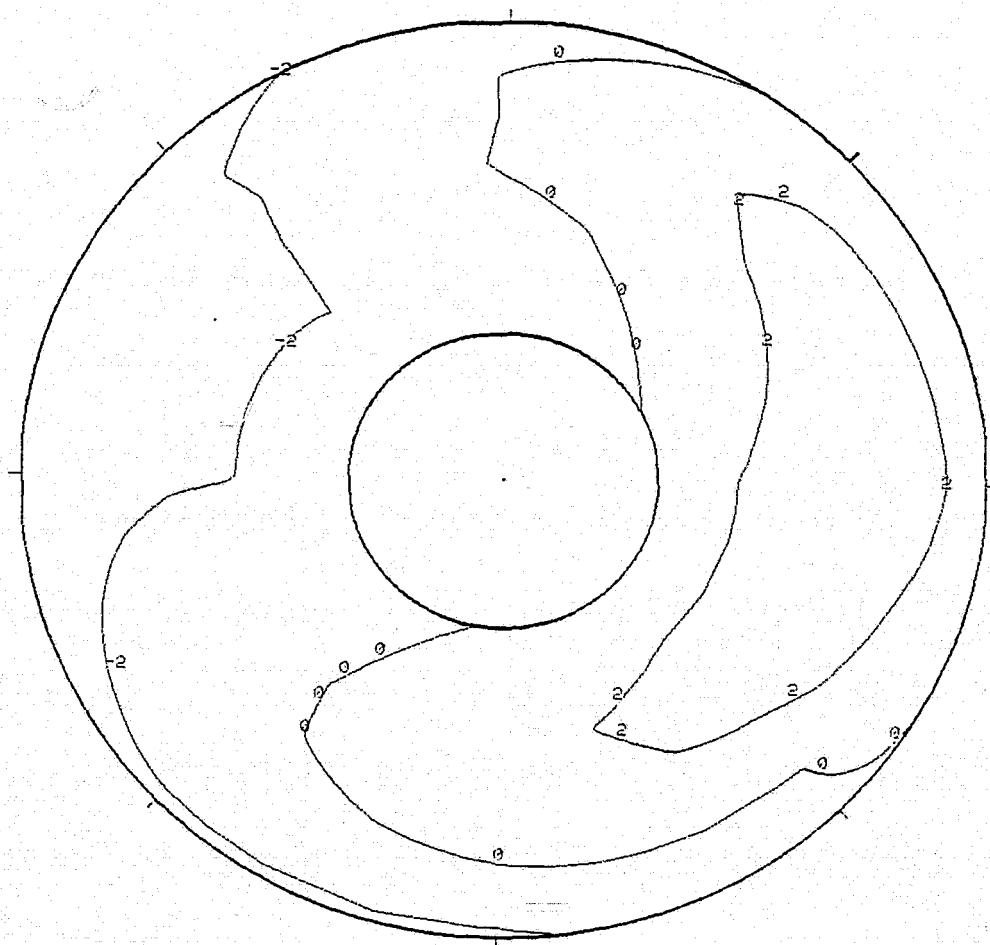
GP77-0658-4

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 250 / 7 IDENT. **58**
 THE SEGMENT START TIME WAS AT 6:25: 2.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 22.6	BYPASS 0.0	WAT2 68.6%	CIVV -25.0
PI 42.29 (6.133)	PI/PS 1.999	KTHETA 0.353	KRA2 0.137	BKRA2 2.995	KR2 3.354	KC2 0.354	KESP 0.353
							D2 0.066

58 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 42.29 kPa (6.133 PSIA)
 NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
 FROM MEAN FACE PRESSURE.

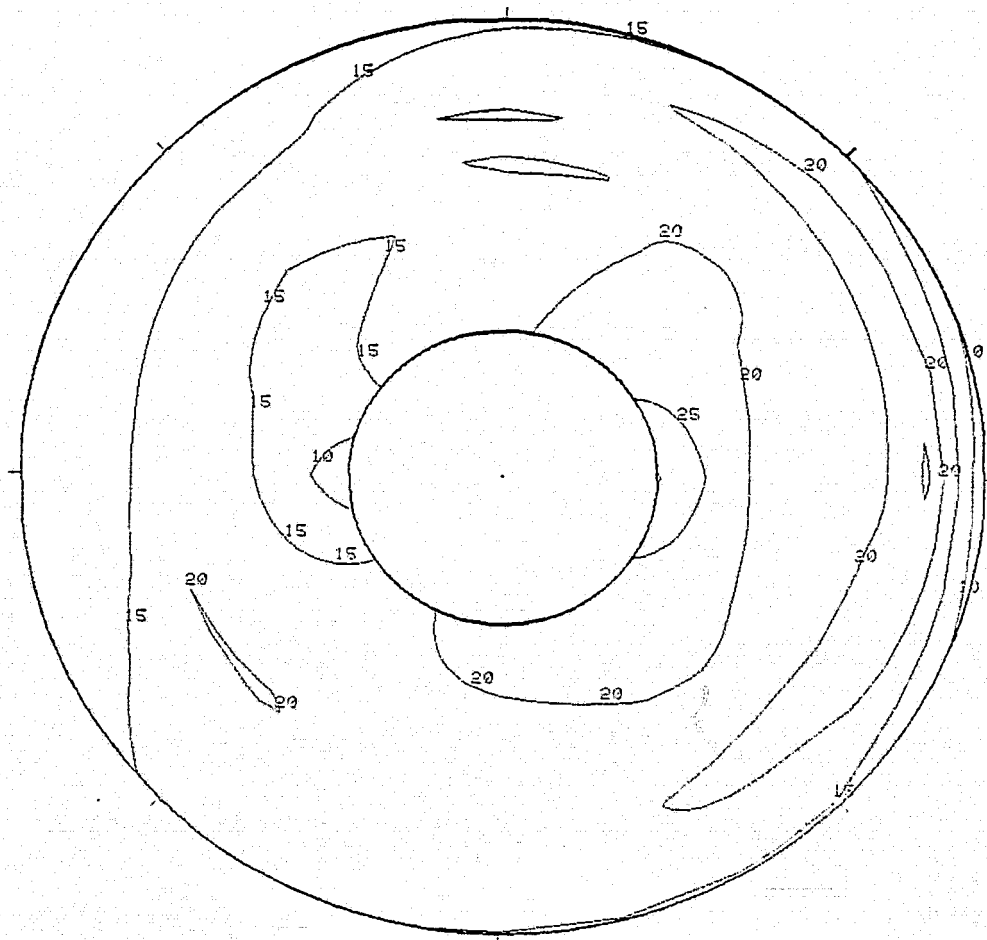
FIGURE G-58 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 68.6 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 250 / 7 IDENT. 88
THE SEGMENT START TIME WAS AT 6:35: 2.045

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
2.2	-2	0	-0.9	22.5	0.0	68.6%	-25.0

58(k) Turbulence Contour 1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01763

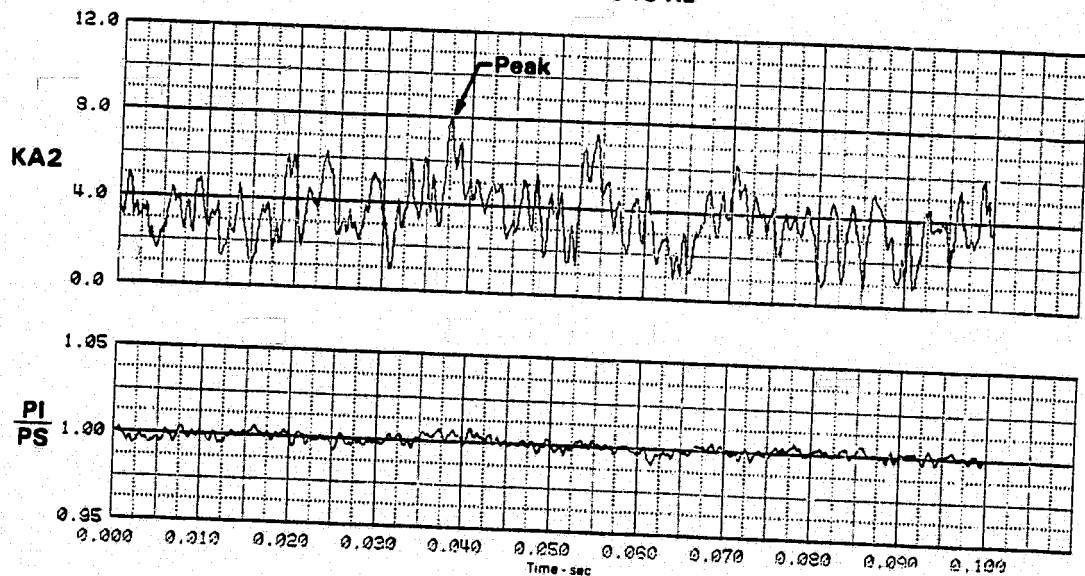
FIGURE G-58 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 68.6\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 250 / 7 IDENT. 58
THE SEGMENT START TIME WAS AT 6:35: 2.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA2 22.5	BYPASS 0.0	WAT2 68.6%	CIVV -25.0
42.44 (6.155)	PI/PS 1.004	KTHETA 0.320	KRA2 0.473	EMPA2 7.551	KR2 7.323	KCS 0.093	KOSP 0.411
							D2 0.118

58(I) Time History Plots
1040 Hz



PEAK AT TIME = 0.037620 SECONDS

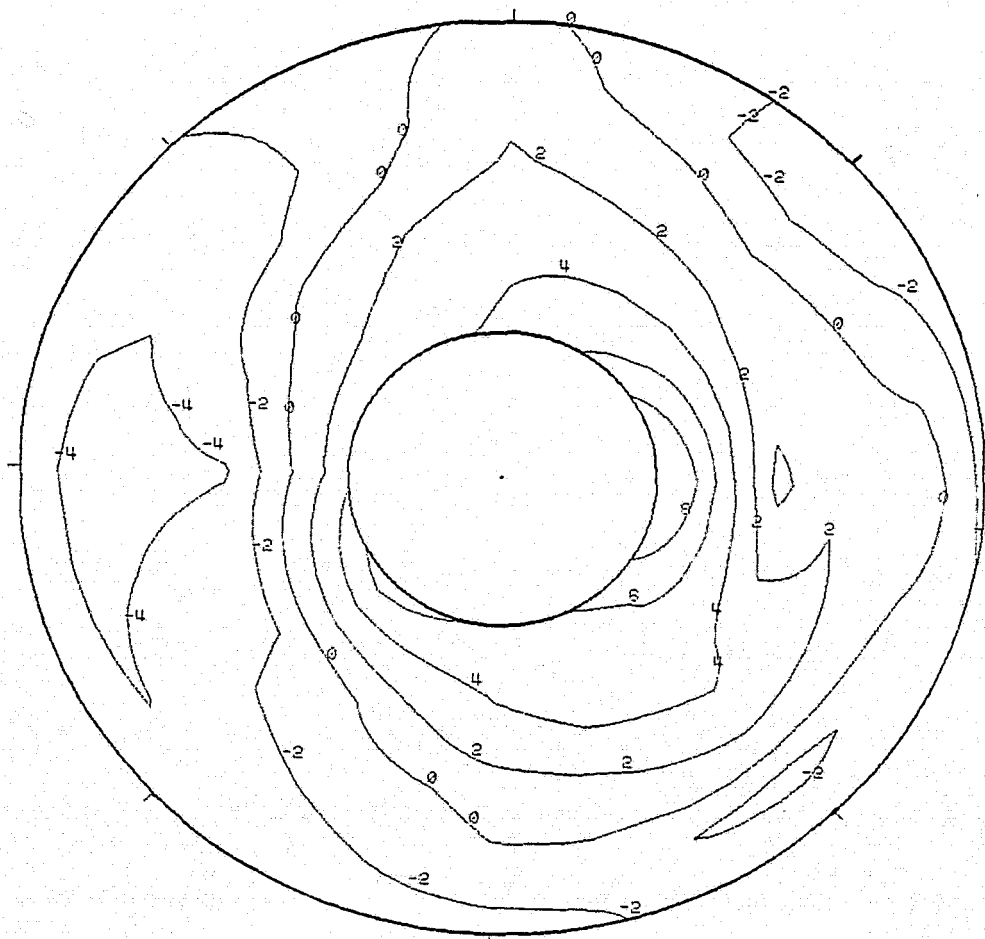
FIGURE G-58 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 68.6%

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 250 / 7 IDENT. 88
THE SEGMENT START TIME WAS AT 6:35: 2.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 22.5	BYPASS 0.0	WAT2 68.6%	CIVV -25.0
P1 42.44 (6.155)	PI/PS 1.004	KTHETA 0.360	KRA2 0.472	BKRA2 7.561	KP2 7.920	KC2 0.496	KOSP 0.411
							D2 0.118

58(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
1040 Hz



MEAN FACE PRESSURE = 42.44 kPa (6.155 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.037620 SECONDS

FIGURE G-58 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 68.6 %

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FSCP - NASA Data Study
 Part/Point - 411/6, Ident 59
 RHO DELTA3 BYPASS CIVV
 -4.0 22.5 0.0 -25.00

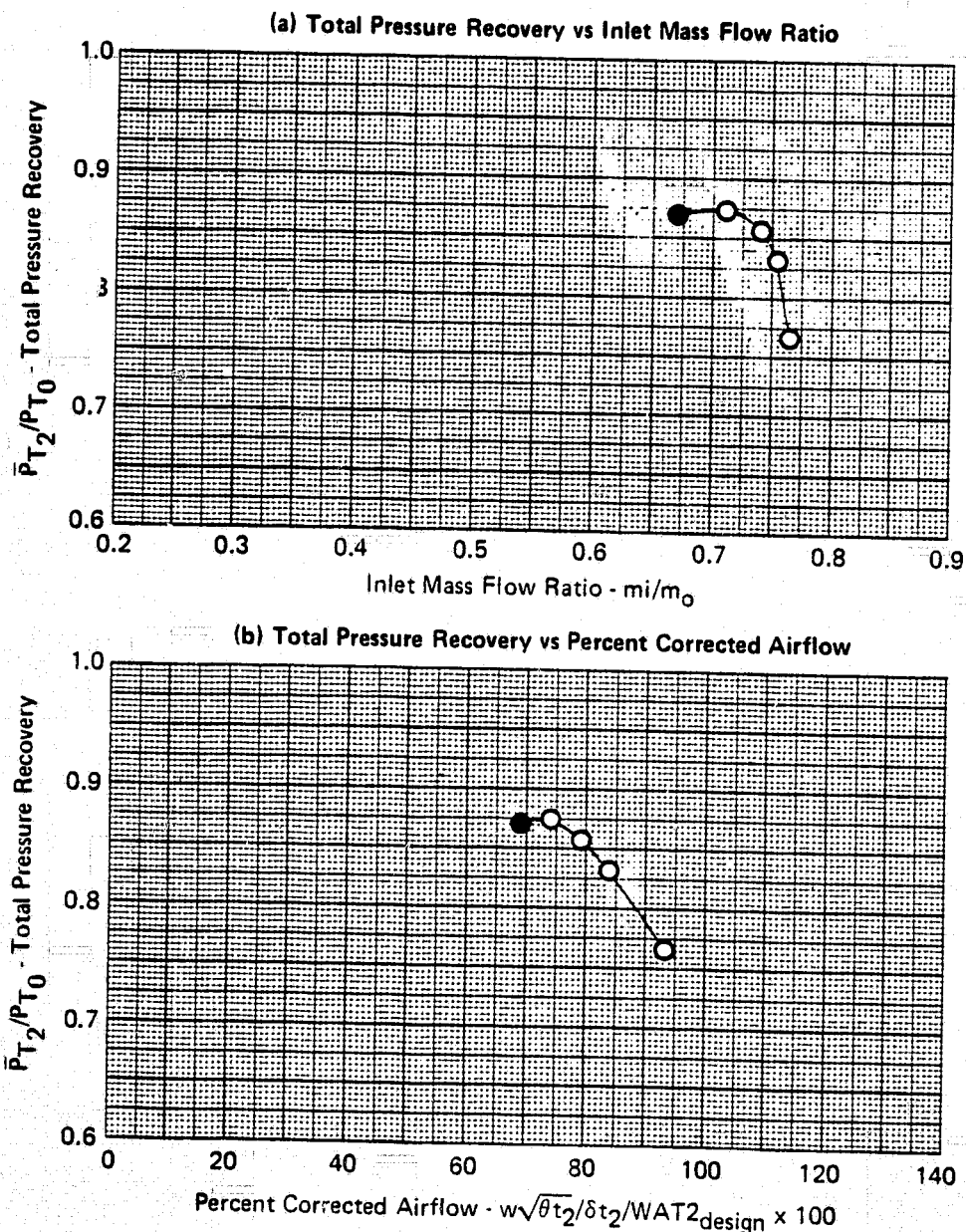
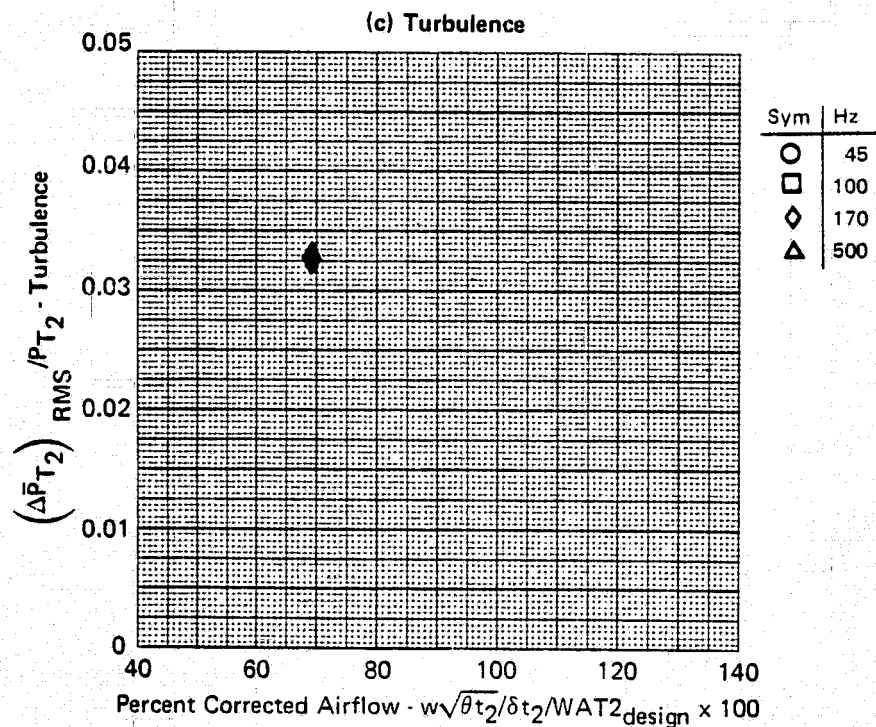


FIGURE G-59
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 69.2\%$

GP77-0658-1

FSCP - NASA Data Study
 Part/Point - 411/6, Ident 59
 RHO DELTA3 BYPASS CIVV
 -4.0 22.5 0.0 -25.00



GP77-0658-5

FIGURE G-59 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 69.2\%$

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FSCP - NASA Data Study
 Part/Point - 411/6, Ident 59
 RHO DELTA3 BYPASS CIVV
 -4.0 22.5 0.0 -25.00

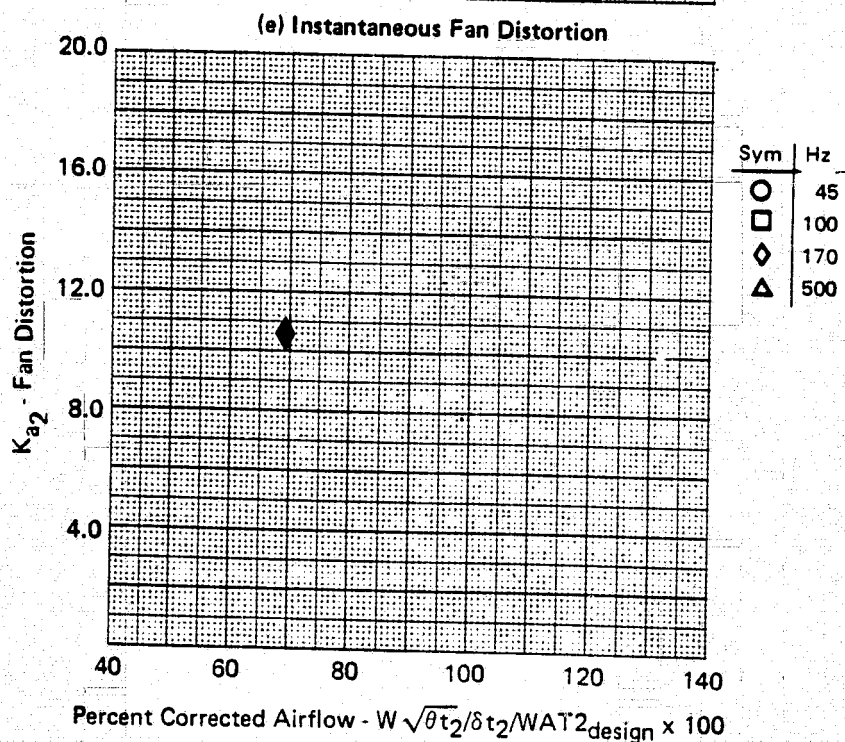
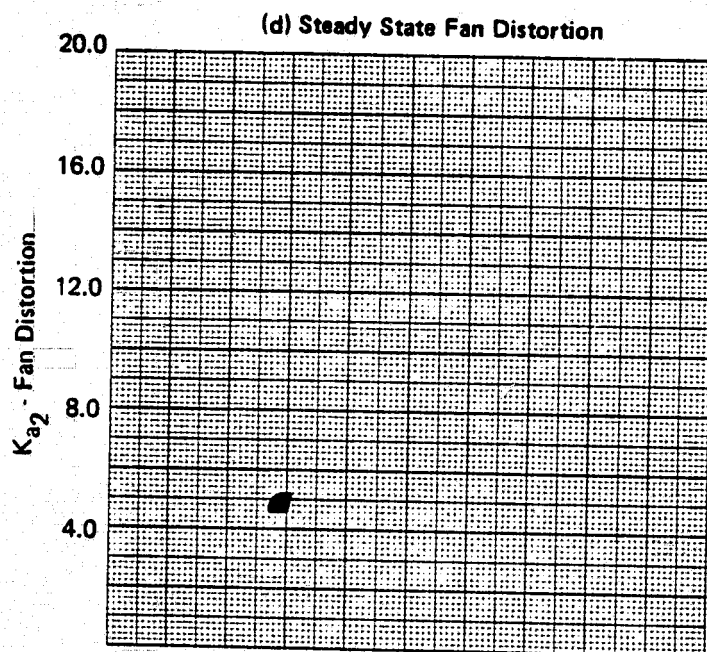


FIGURE G-59 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 69.2\%$

GP77-0658-3

FSCP - NASA Data Study
 Part/Point - 411/6, Ident 59
 RHO DELTA3 BYPASS CIVV
 -4.0 22.5 0.0 -25.00

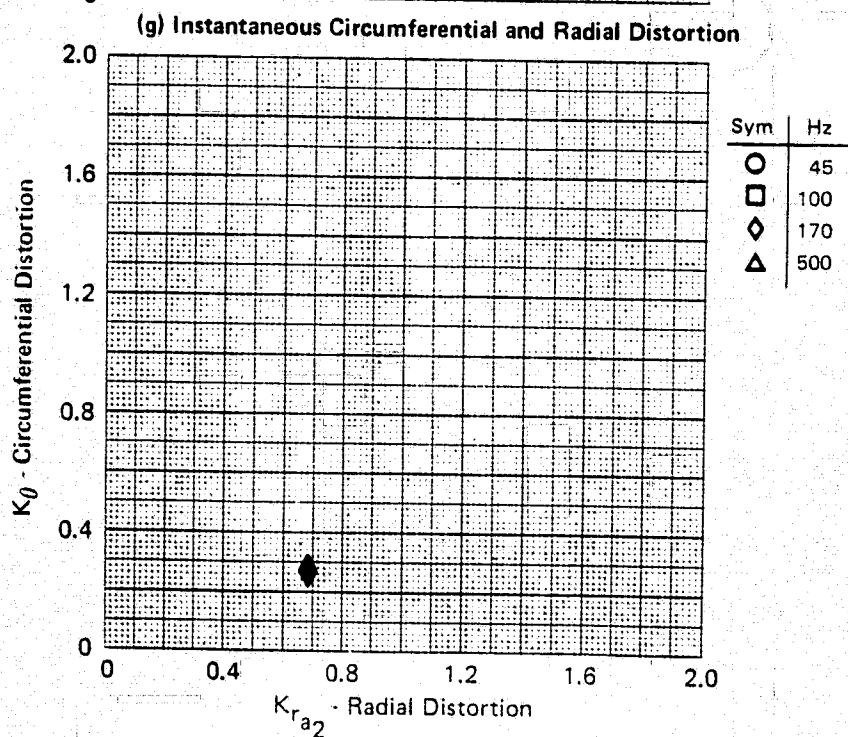
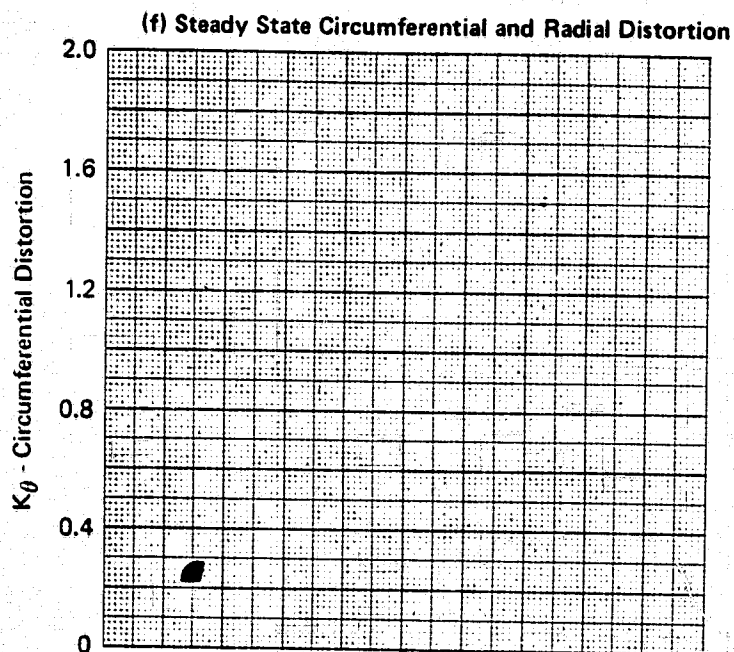
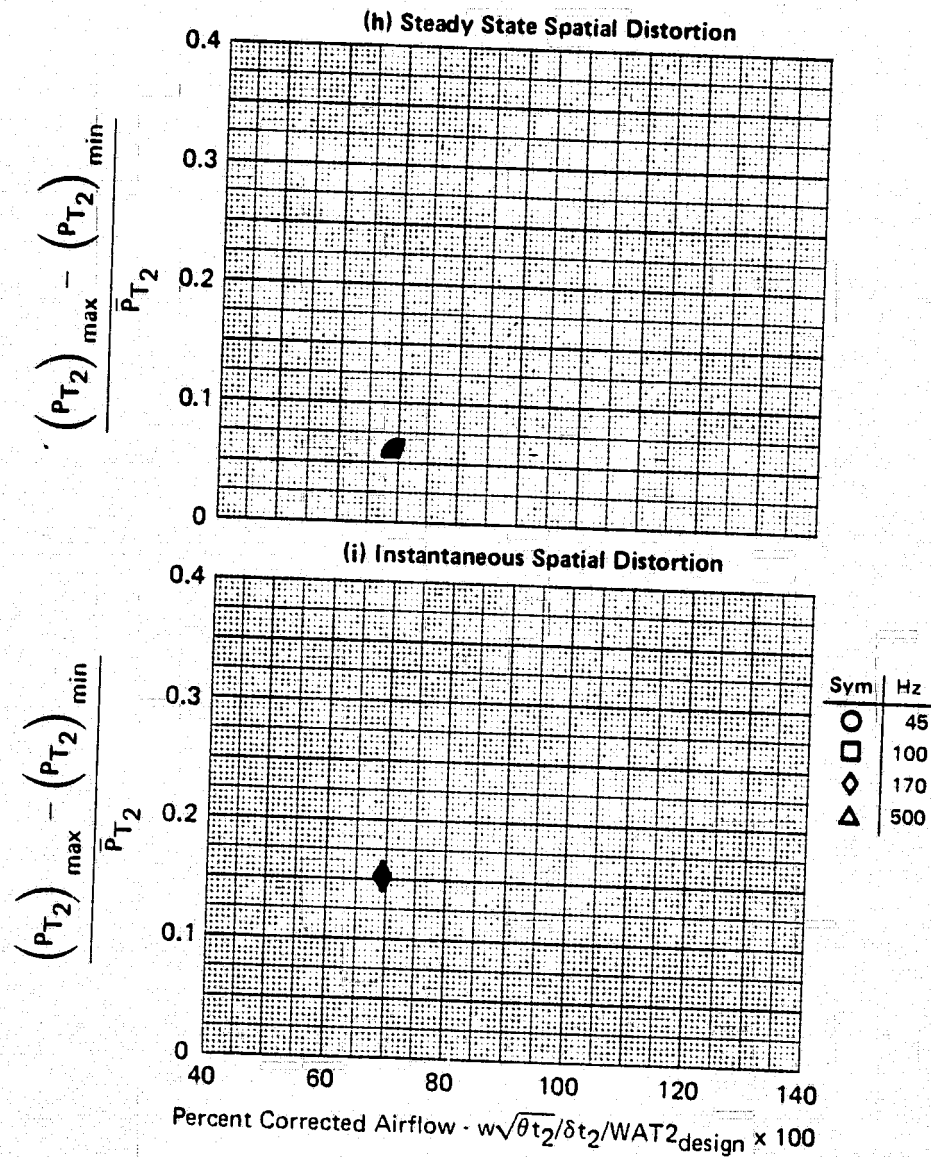


FIGURE G-59 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 69.2%

GP77-0658-2

FSCP - NASA Data Study
 Part/Point - 411/6, Ident 59
 RHO DELTA3 BYPASS CIVV
 -4.0 22.5 0.0 -25.00



GP77-0658-4

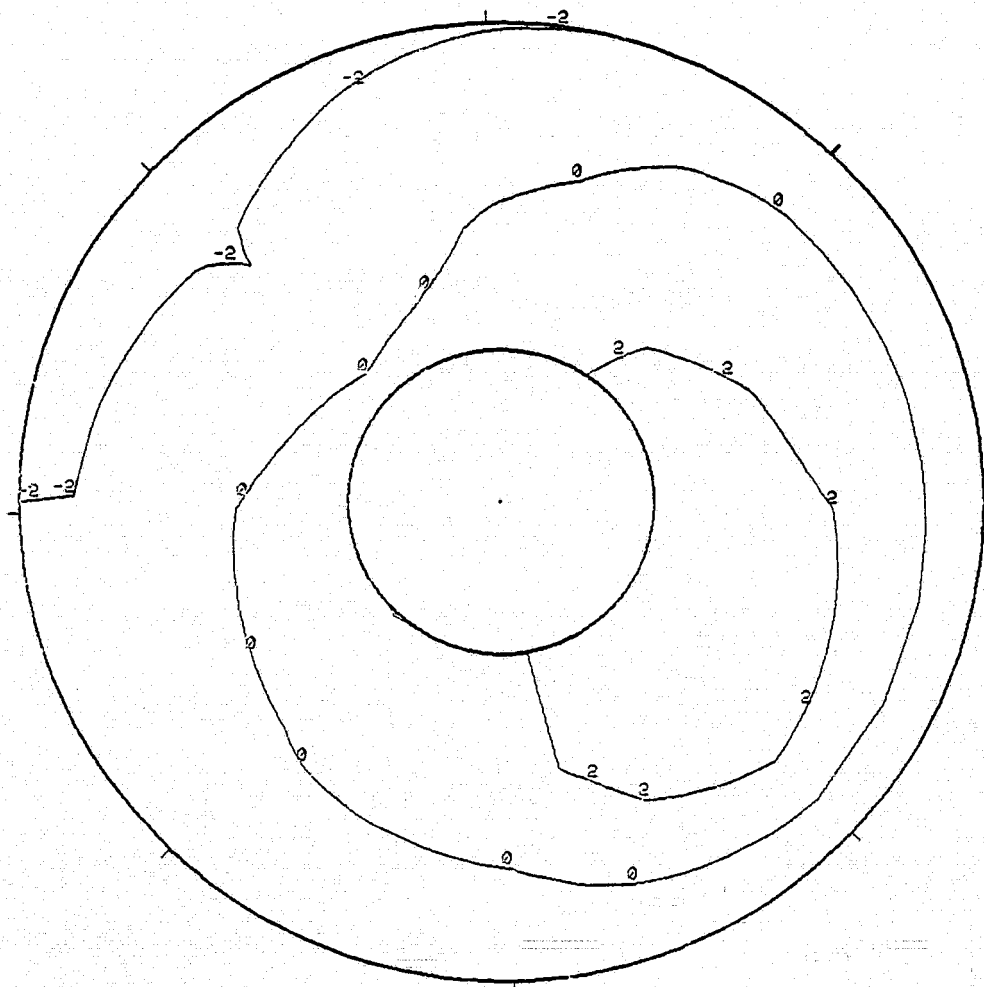
FIGURE G-59 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 69.2\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 411 / 6 IDENT. 59
THE SEGMENT START TIME WAS AT 21:40:48.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 22.5	BYPASS 0.2	WAT2 69.2%	CIVV -25.0
P1 41.80 (6.063)	P1/PS 1.000	KTHETA 0.202	KRA2 0.301	BKRA2 4.586	KA2 4.828	KC2 0.251	KESP 0.271
							D2 0.061

59 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 41.80 kPa (6.063 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-59 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 69.2 %

FSCP - NASA DATA STUDY

DATA PART/POINT 411 / 6 IDENT. 59
THE SEGMENT START TIME WAS AT 21:40:48.091

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

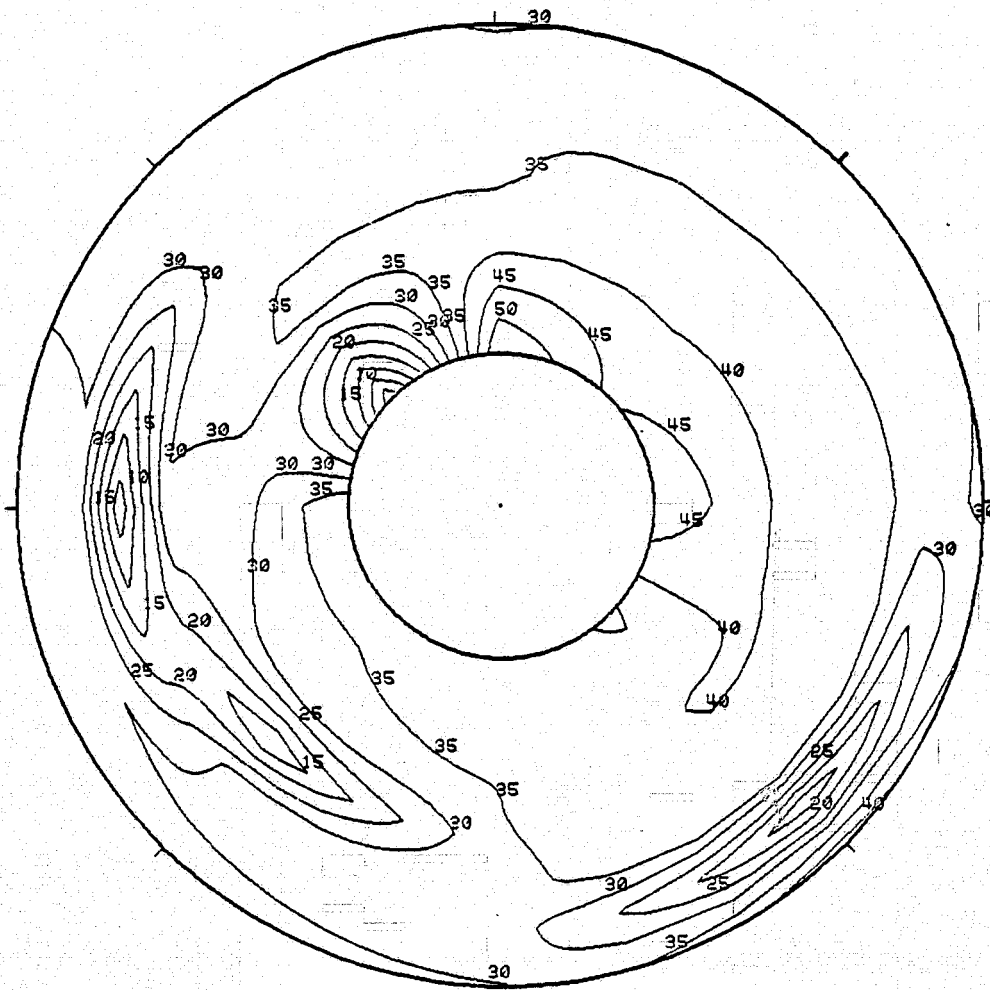
DELTA3
22.5

BYPASS
0.0

WAT2
69.2%

CIVV
-25.0

59(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .03267

FIGURE G-59 (Continued)

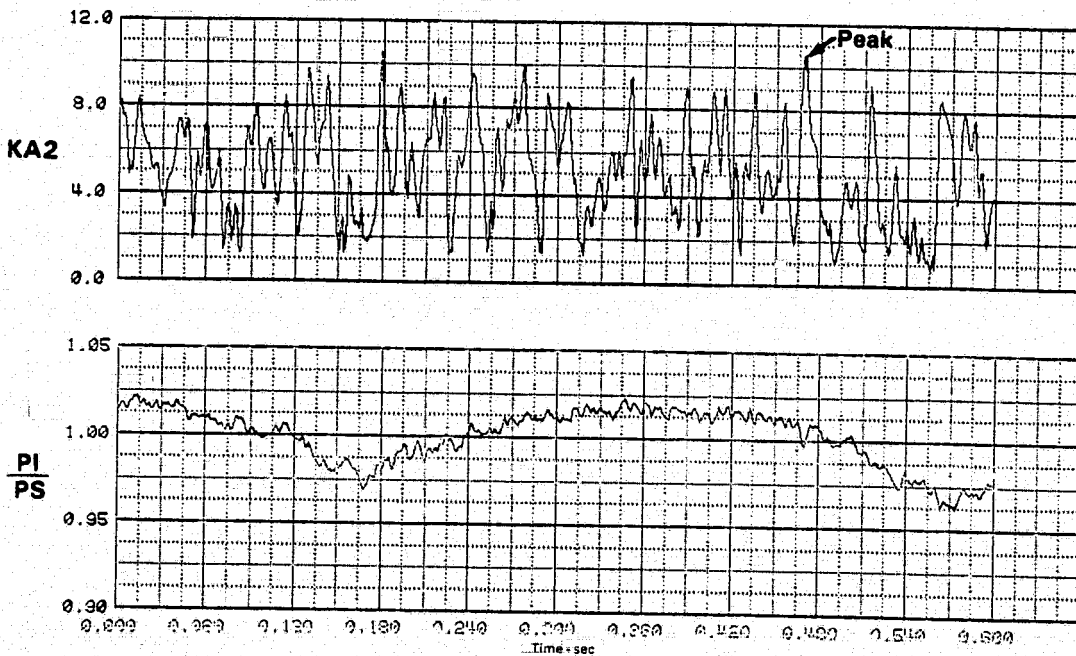
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 69.2\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 411 / 6 IDENT. 59
THE SEGMENT START TIME WAS AT 21:40:43.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DEL T23 22.5	BYPASS 0.0	WAT2 69.2%	CIVV -25.0
PI 41.69 (6.046)	PI/PS 0.997	KTHETA 0.234	KRA2 0.621	SKRA2 10.361	KA2 10.625	KC2 0.253	KOSP 0.247
							D2 0.152

59(I) Time History Plots 170 Hz



PEAK AT TIME = 0.469588 SECONDS

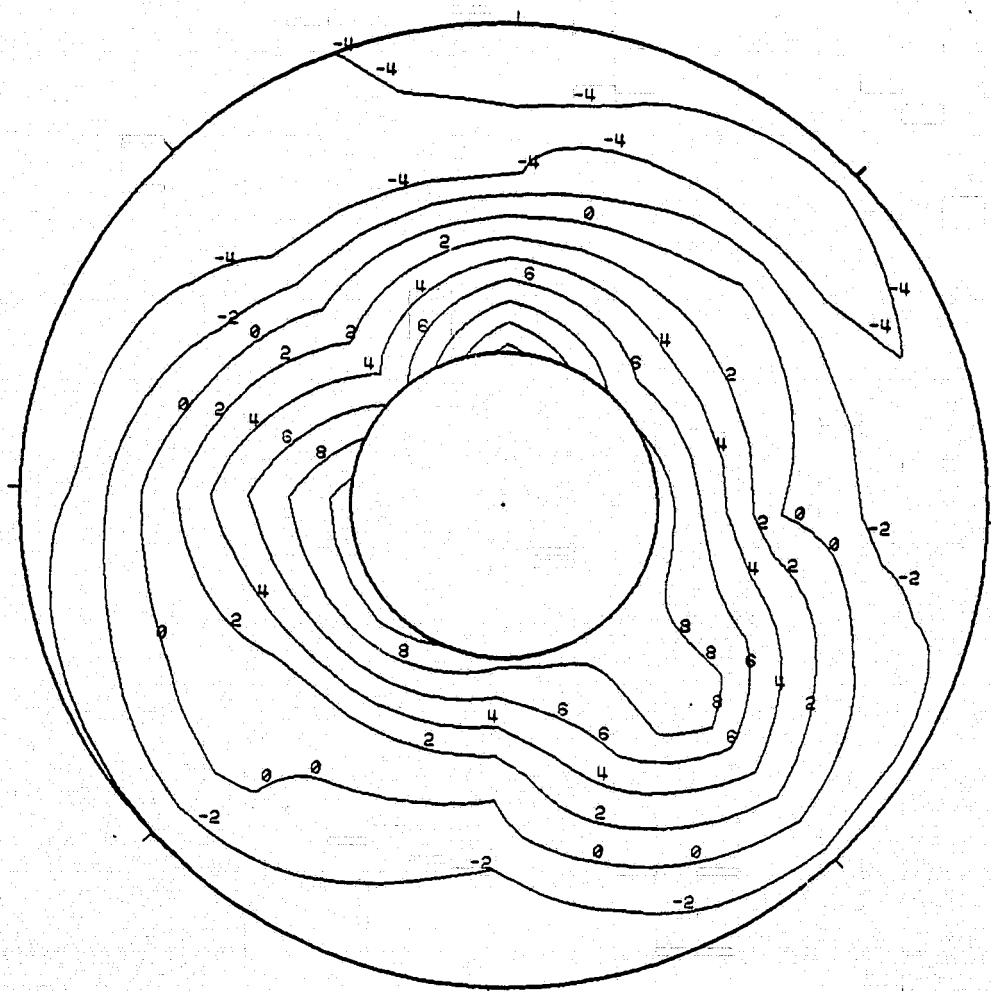
FIGURE G-59 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 69.2\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 411 / 6 IDENT. 59
THE SEGMENT START TIME WAS AT 21:40:48.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 22.5	BYPASS 0.0	WAT2 69.2%	CIVV -25.0
P1 41.69 (6.046)	PI/PS 0.997	KTHETA 0.264	KRA2 0.681	BKRA2 10.361	KA2 10.625	KC2 0.263	KOSP 0.247
							D2 0.152

59(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 41.69 kPa (6.046 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.469588 SECONDS

FIGURE G-59 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 69.2\%$

SERIES VIII - NASA Data Study
 Part/Point - 249/5, Ident 60
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00

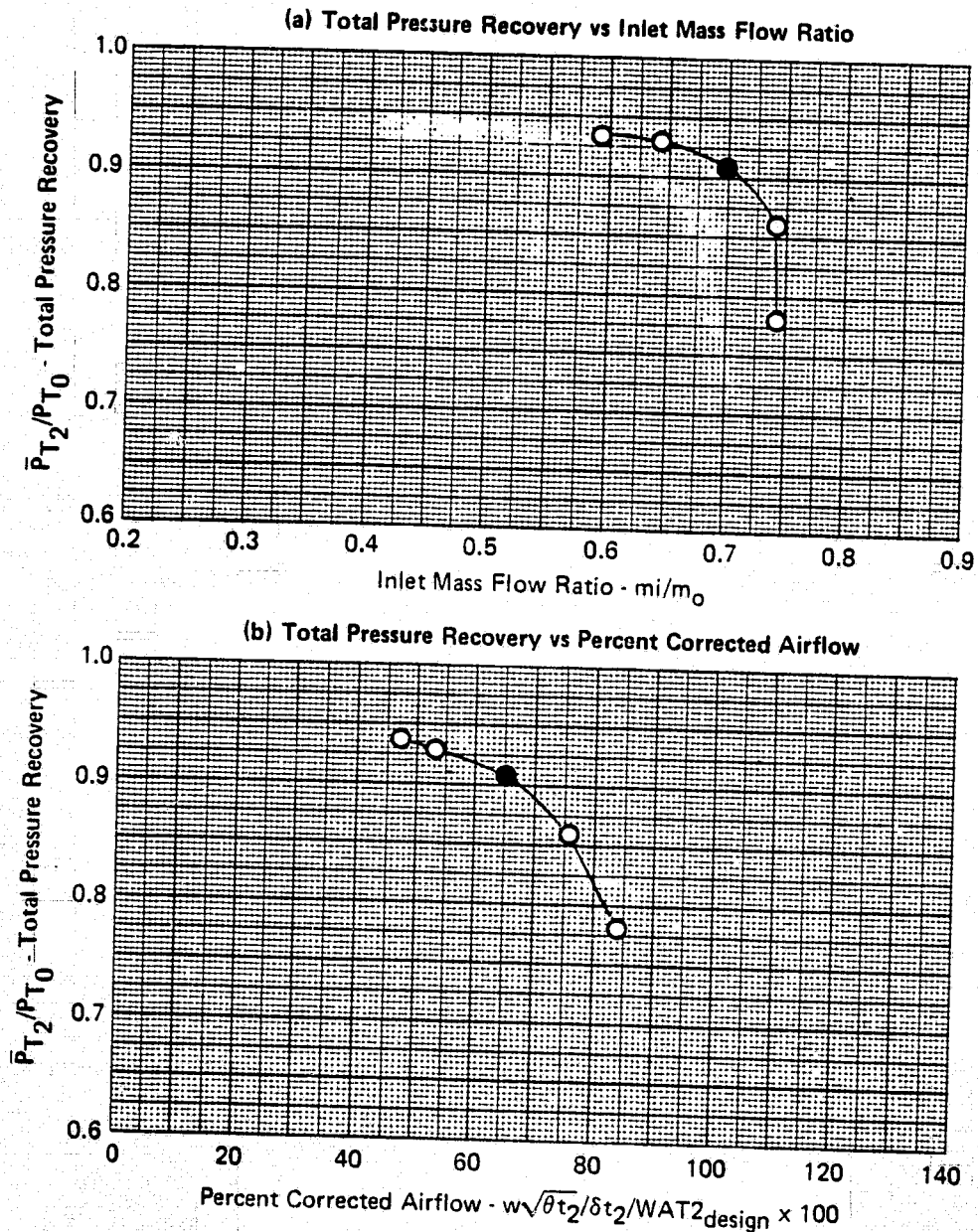
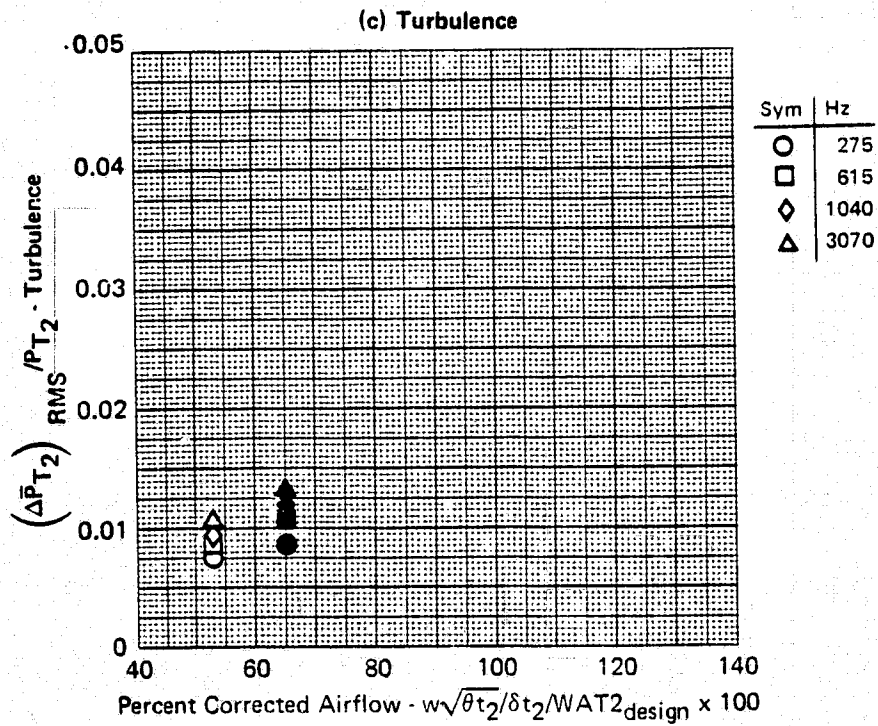


FIGURE G-60
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 65.0\%$

GP77-0658-1

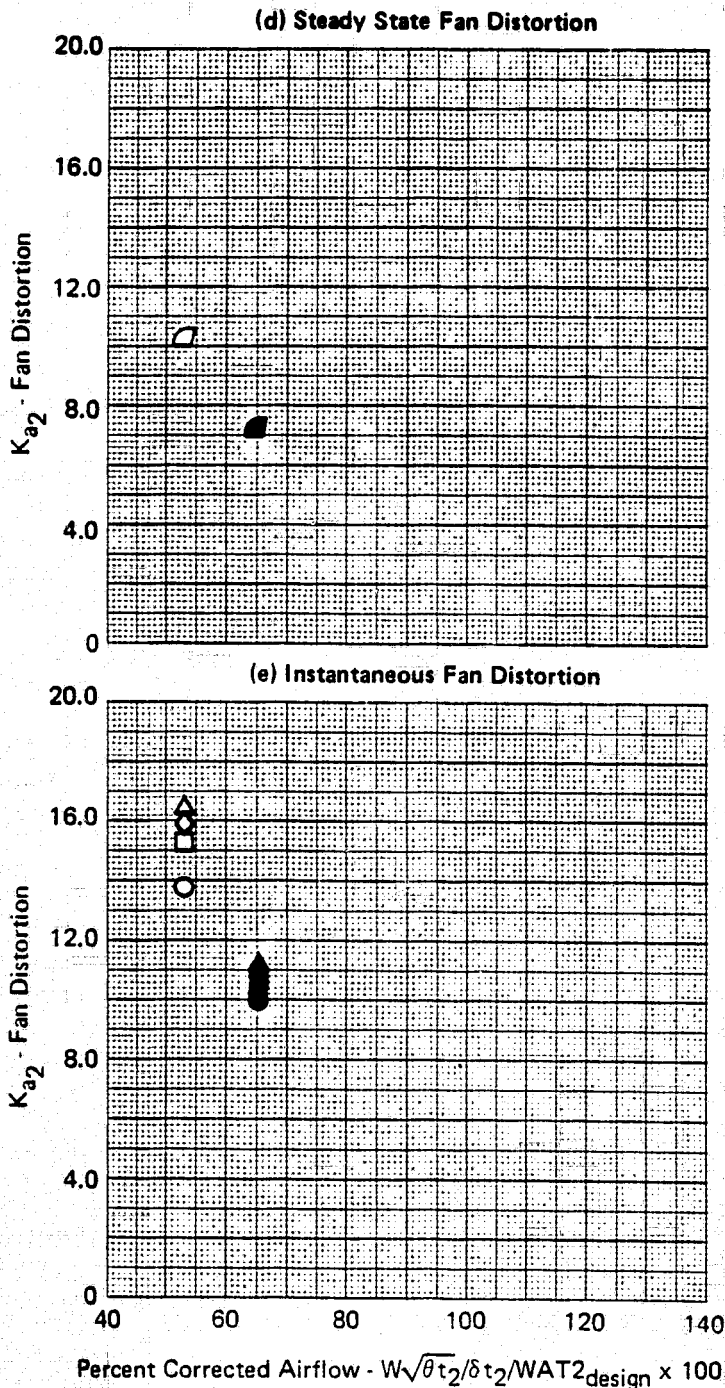
SERIES VIII - NASA Data Study
 Part/Point - 249/5, Ident 60
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00



GP77-0658-5

FIGURE G-60 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 65.0\%$

SERIES VIII - NASA Data Study
 Part/Point - 249/5, Ident 60
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00



GP77-0658-3

FIGURE G-60 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 65.0\%$

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SERIES VIII - NASA Data Study
 Part/Point - 249/5, Ident 60
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00

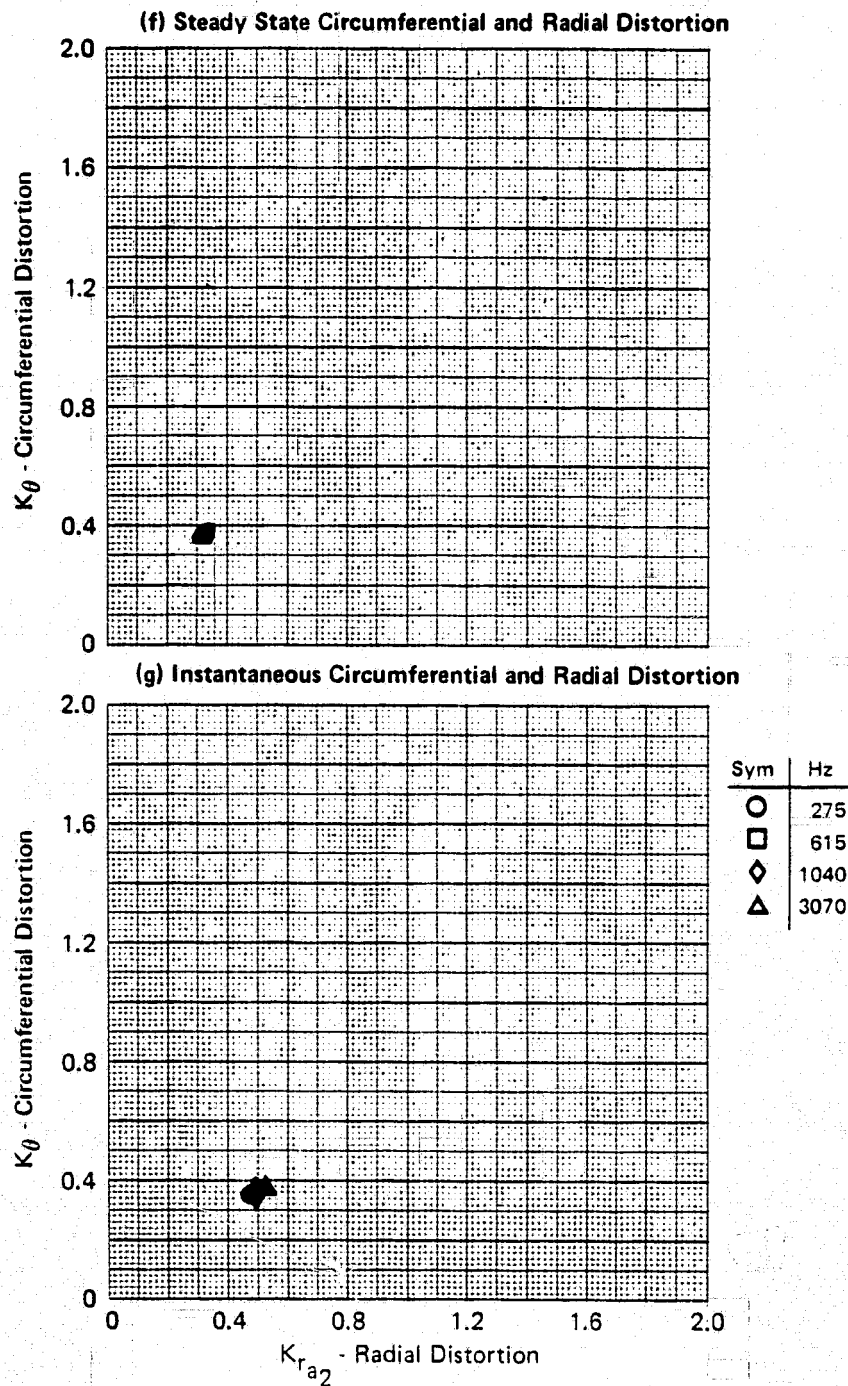


FIGURE G-60 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 65.0\%$

SERIES VIII - NASA Data Study
 Part/Point - 249/5, Ident 60

RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00

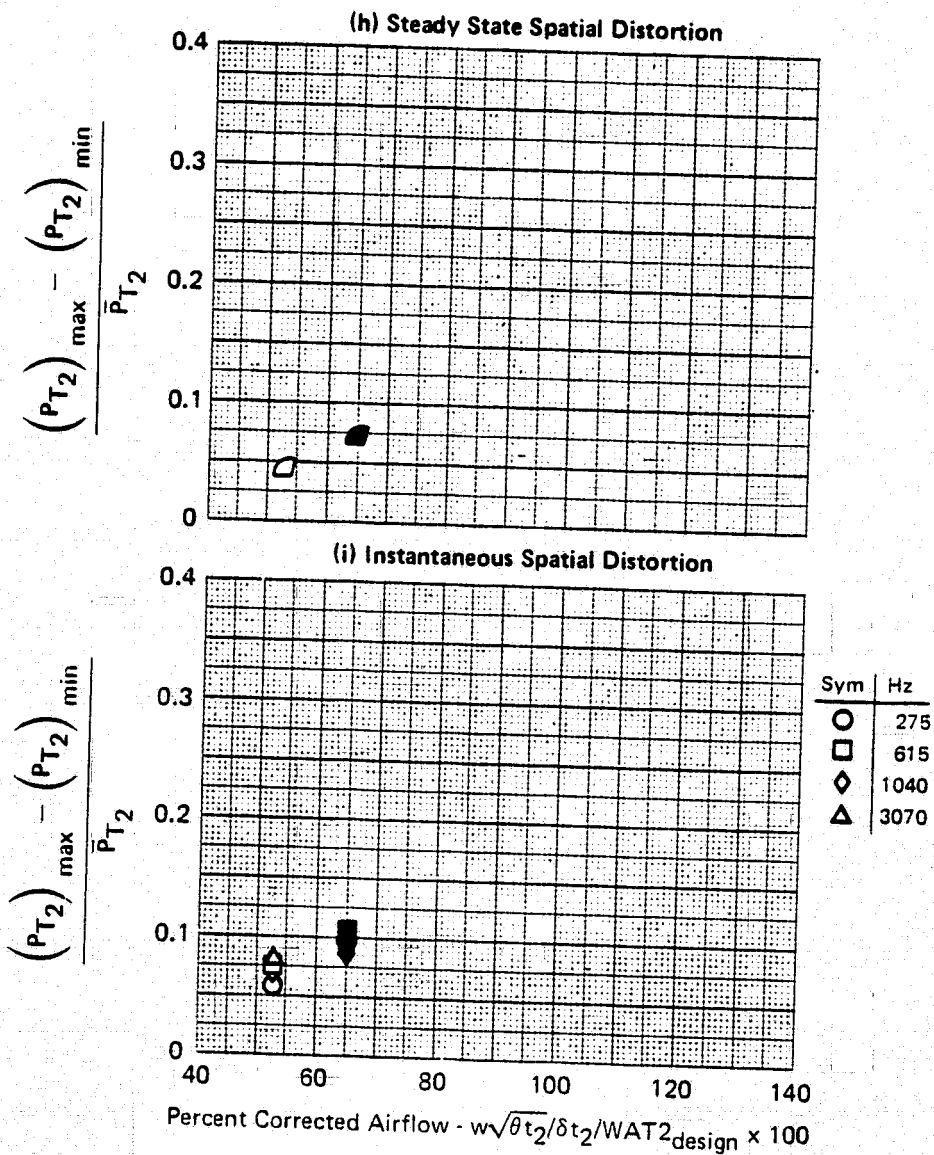


FIGURE G-60 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 65.0 \%$

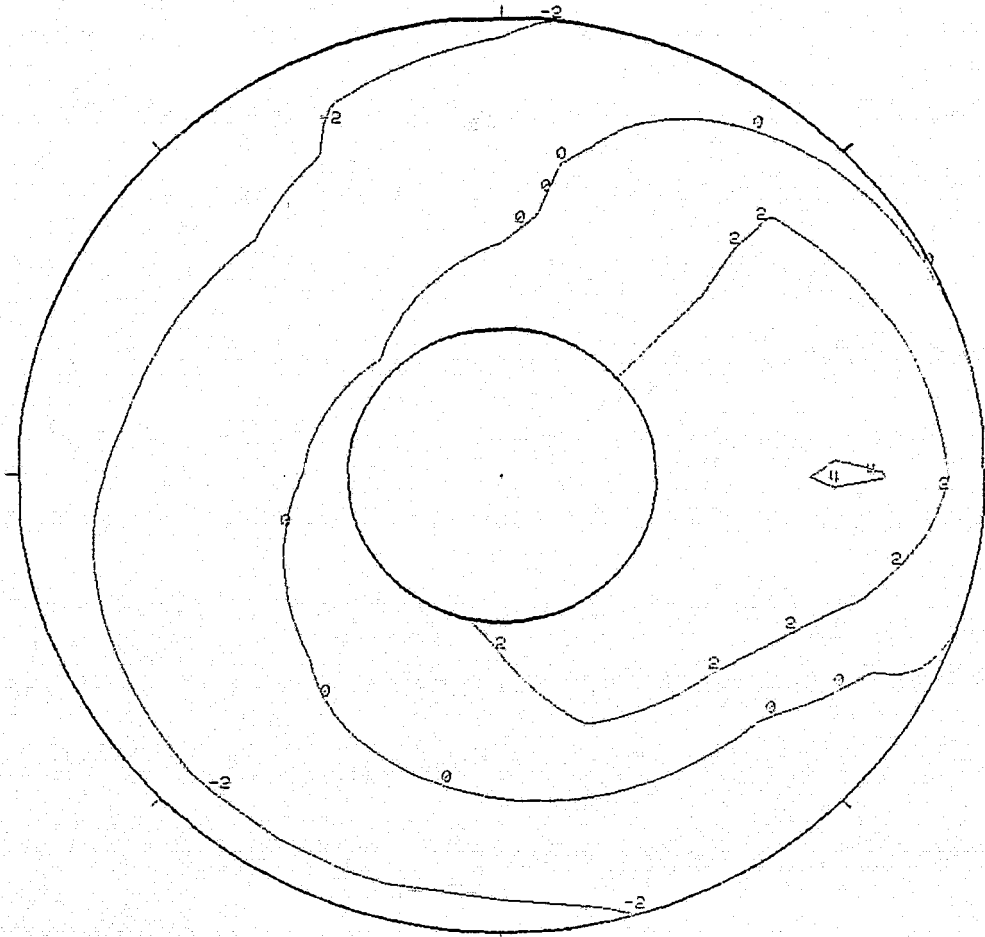
GP77-0658-4

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 5 IDENT. 60
THE SEGMENT START TIME WAS AT 8:19:53.045

MACH 2.2	ALPHA -2	BETA 0	PHI -1.0	DELTA 25.0	AVGSS 0.07742 (120.0)	WAT2 65.0%	Q1W -15.0
PI 42.86 (6.216)	PI/PS 1.000	KTHETA 0.364	KPA2 0.331	BKRA2 5.840	KQ2 7.205	KQ2 0.311	KESP 0.370
							D2 0.059

60 (J) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 42.86 kPa (6.216 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-60 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 65.0 %

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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 5 IDENT. 60
THE SEGMENT START TIME WAS AT 8:15:59.045

MACH
2.2

ALPHA
-2

BETA
0

RHO
-1.0

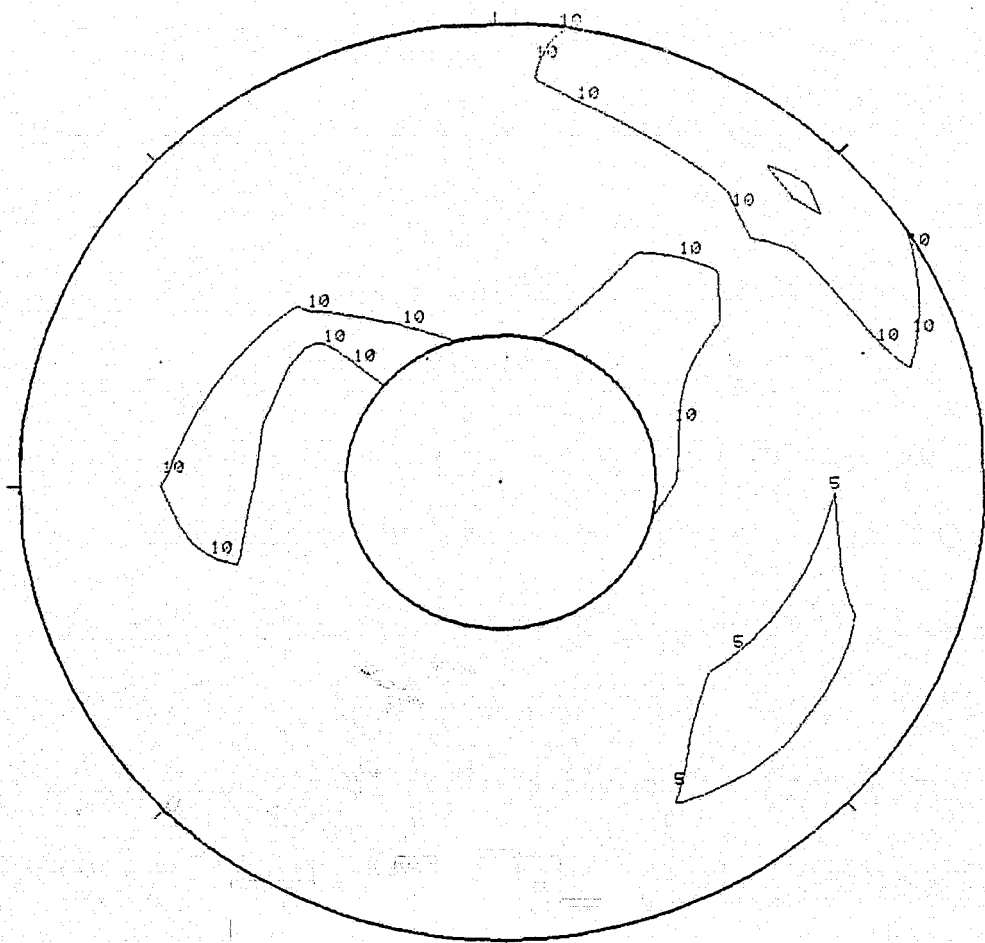
DELTA3
35.0

BYPASS
0.07742 (120.0)

WAT2
65.0%

CIVV
-25.0

60(k) Turbulence Contour 275 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00859

FIGURE G-60 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 65.0 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 5 IDENT. 60
THE SEGMENT START TIME WAS AT 6:15:59.045

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

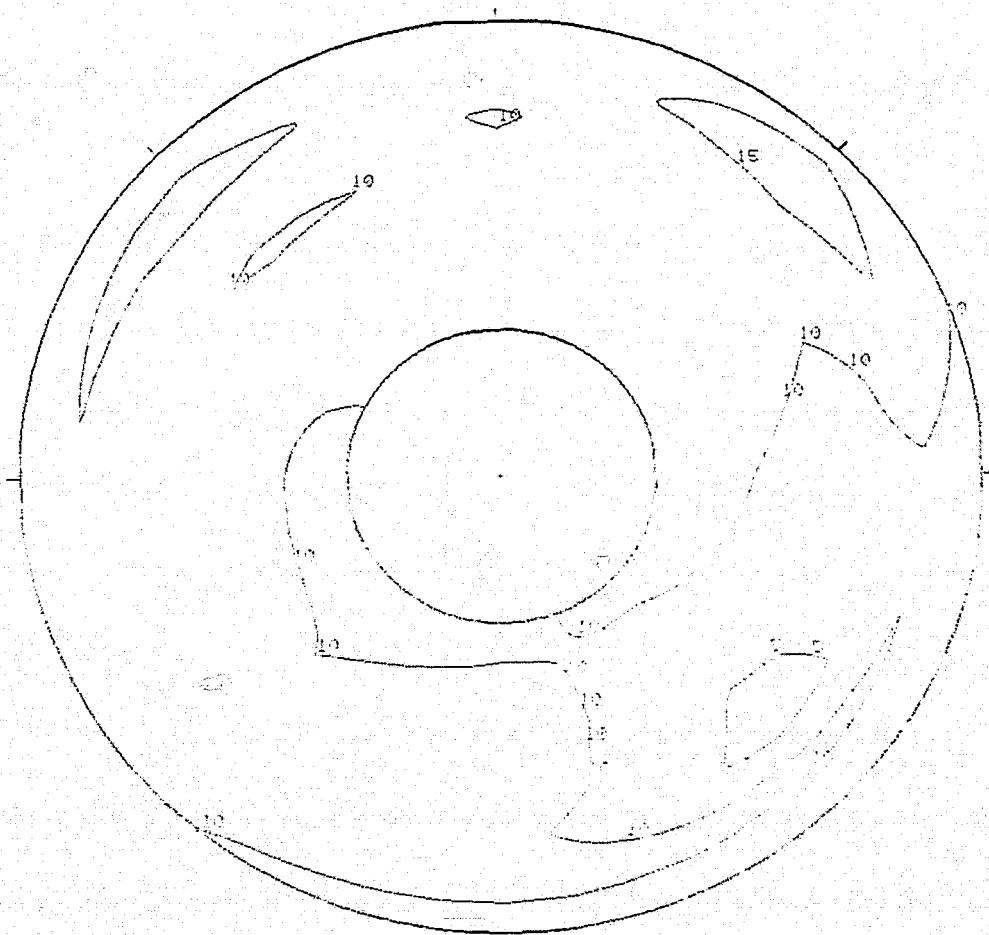
DELTA3
25.0

BYPASS
0.07742 (120.0)

WAT2
65.0%

CIVV
-25.0

60(l) Turbulence Contour 615 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01070

FIGURE G-60 (Continued)

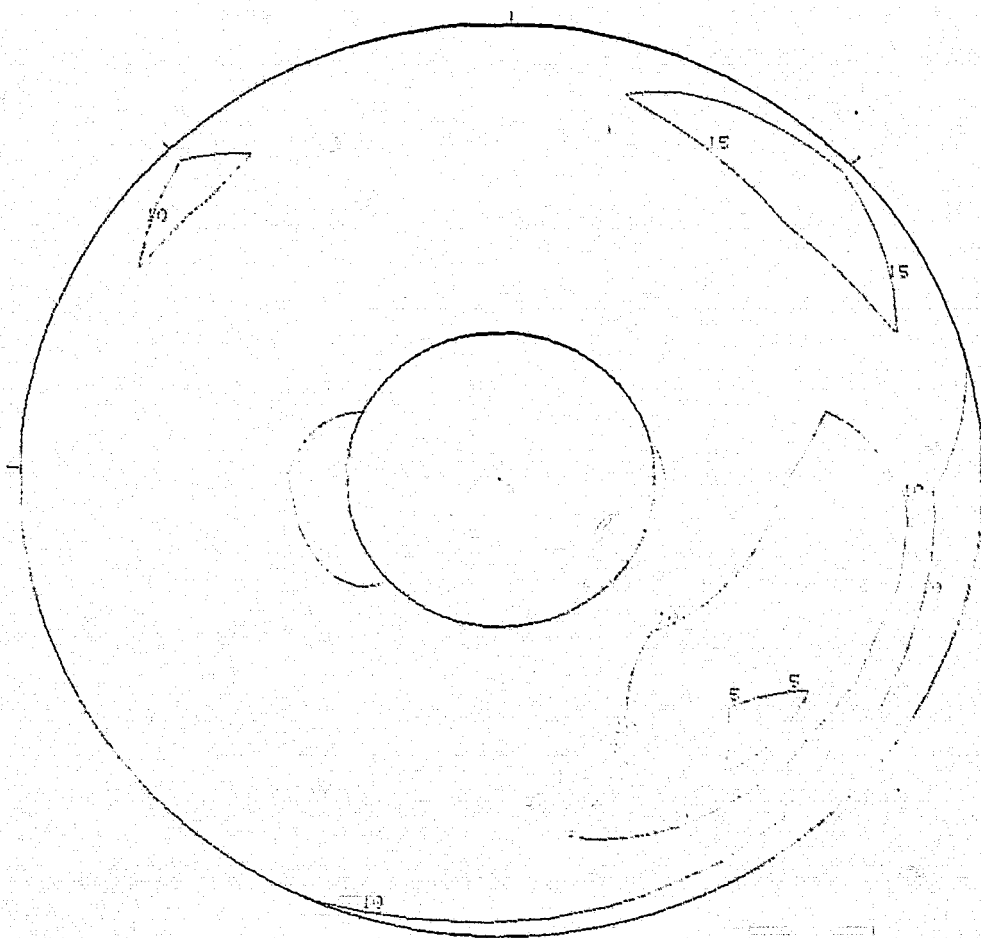
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 65.0\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 240 / 5 IDENT. 60
THE SEGMENT START TIME WAS AT 6:15:53.045

MACH 2.2	ALPHA -2	BETA 0	PHI -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 65.0%	CIVV -25.0
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60(m) Turbulence Contour 1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01158

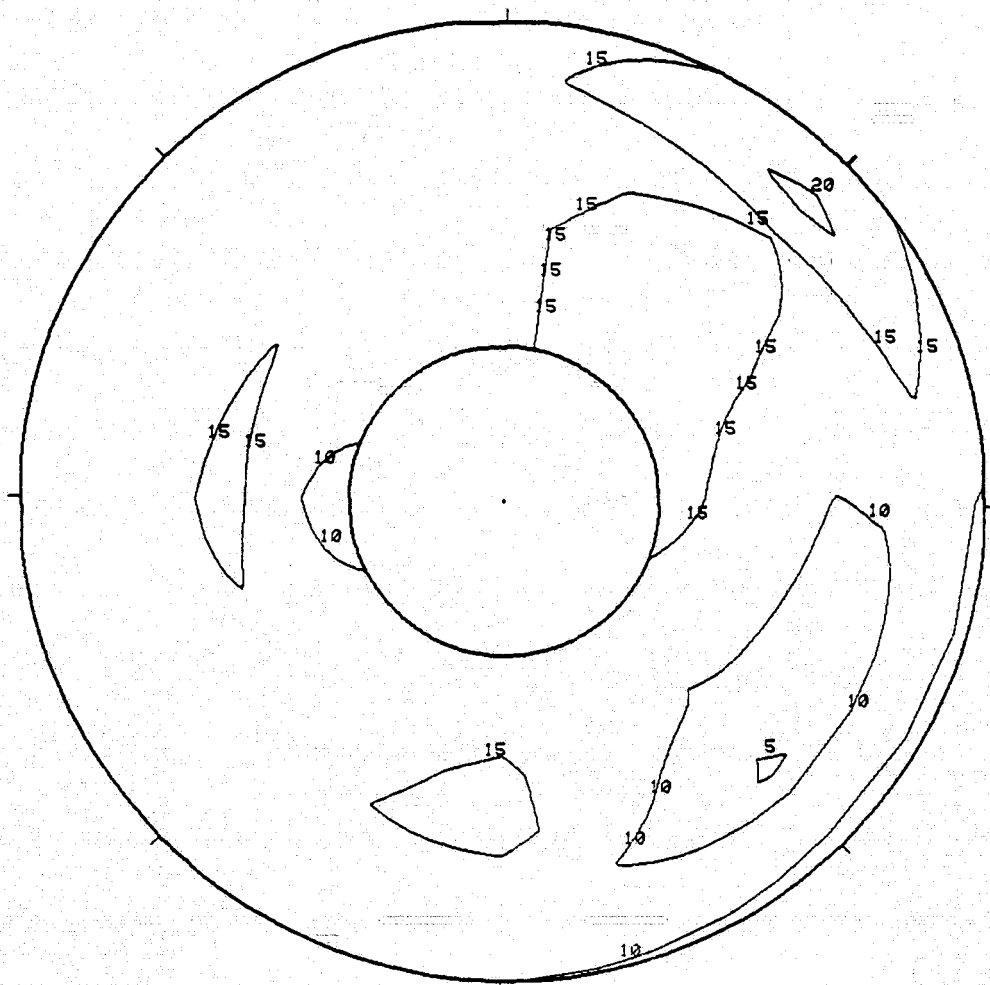
FIGURE G-60 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 65.0 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 5 IDENT. 80
THE SEGMENT START TIME WAS AT 6:15:59.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 65.0%	CIVV -25.0
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60(n) Turbulence Contour 3070 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01306

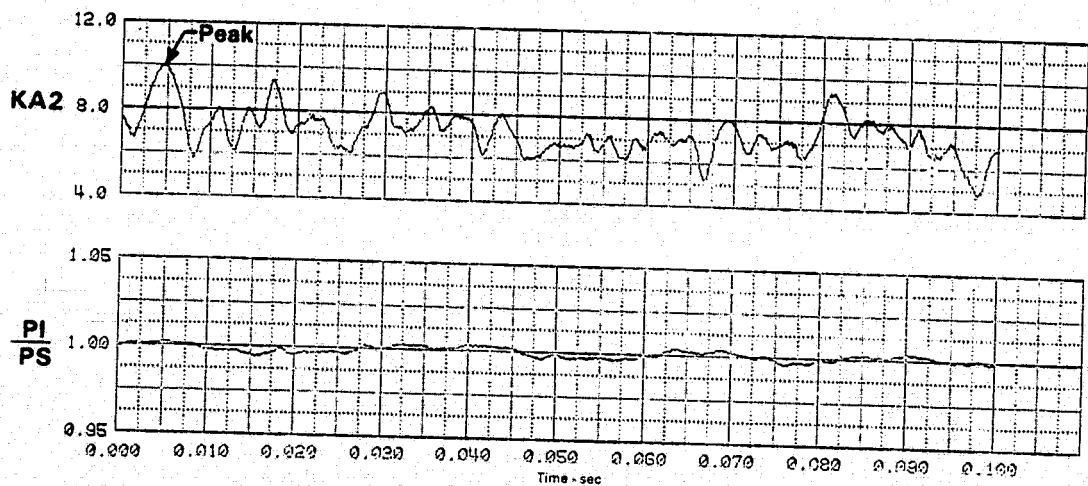
FIGURE G-60 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 65.0\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 5 IDENT. 60
THE SEGMENT START TIME WAS AT 0:15:53.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA2 25.0	BYPOSS 0.07742 (120.0)	WAT2 65.0%	CIVV -25.0
PI 42.93 (6.227)	PI/PS 1.002	KTHETA 9.354	KPA2 0.487	BIKE2 9.501	KAR 10.128	KC2 0.1381	DC 0.092

60(o) Time History Plots 275 Hz



PEAK AT TIME = 0.004950 SECONDS

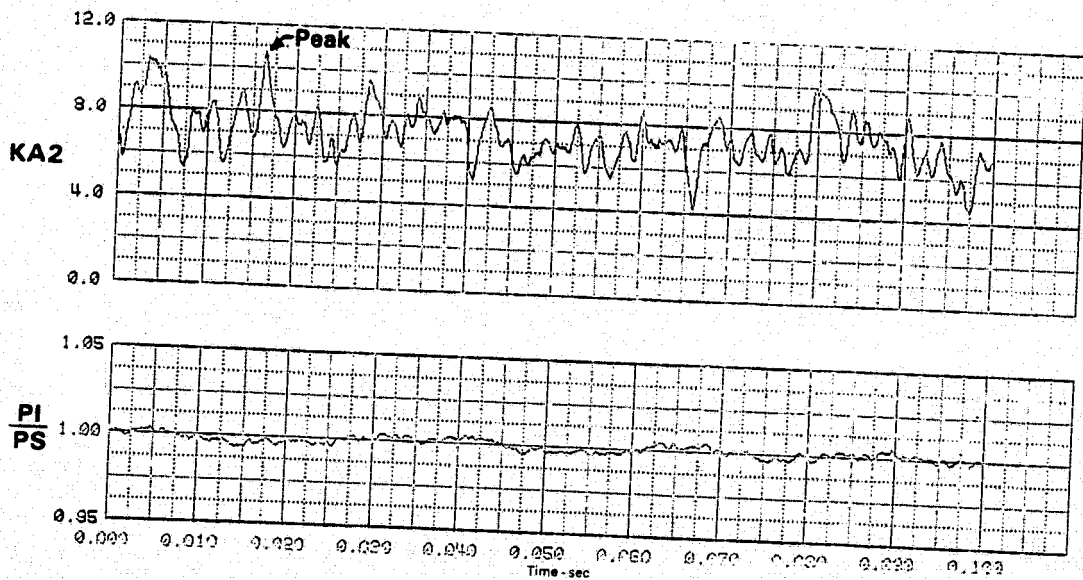
FIGURE G-60 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 65.0%

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 5 IDENT. 60
THE SEGMENT START TIME WAS AT 0:15:53.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BNP333 0.07742 (120.0)	WAT2 65.0%	CIVV -25.0
PI 42.66 (6.188)	PI/PS 0.995	KTHETA 0.392	KPA2 0.900	BKPA2 10.340	KPA2 10.722	KPS 0.949	KPS2 0.977
							CS 0.107

60(p) Time History Plots 615 Hz



PEAK AT TIME = 0.016335 SECONDS

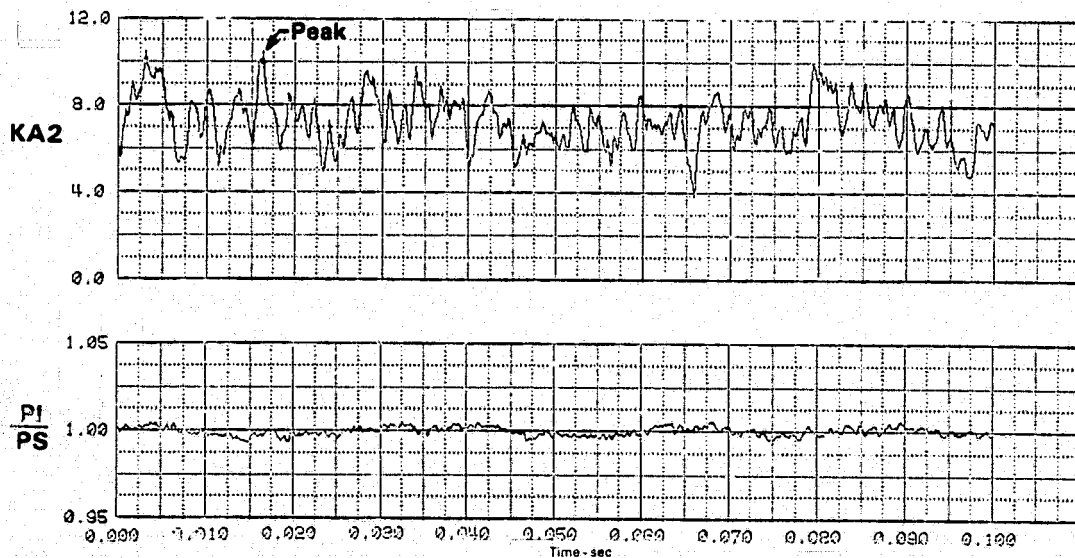
FIGURE G-60 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 65.0%

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 5 IDENT. 60
THE SEGMENT START TIME WAS AT 6:15:59.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	SYNAPS 0.07742 (120.0)	WAT2 65.0%	CLVV -25.0
PI 42.74 (6.199)	PI/PS 0.997	KTHETA 0.360	KPA2 0.433	BPAP2 10.000	KP2 10.452	KC2 0.332	KOSP 0.307
							D2 0.039

60(q) Time History Plots 1040 Hz



PEAK AT TIME = 0.016335 SECONDS

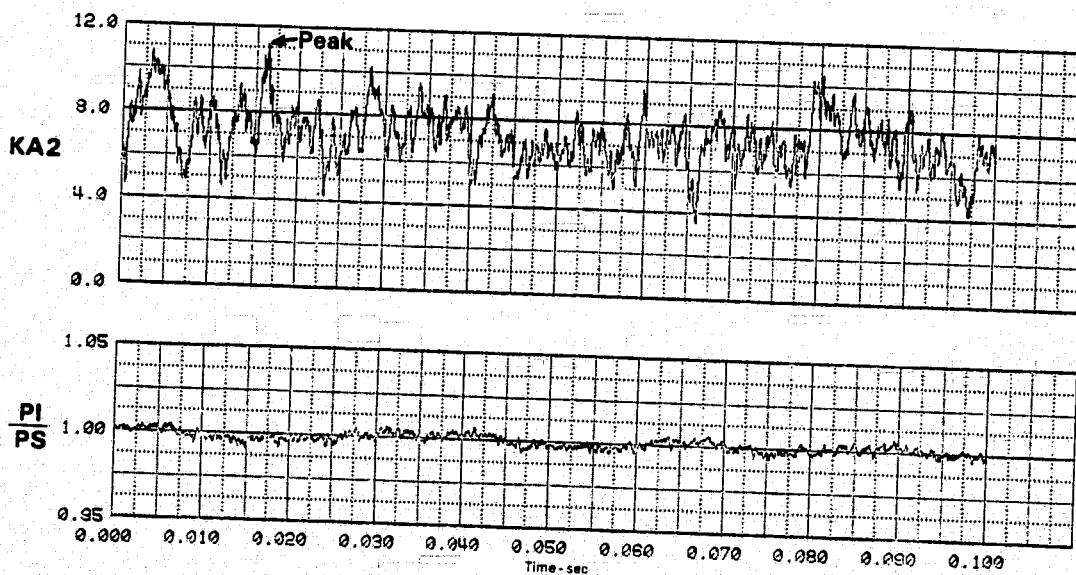
FIGURE G-60 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 65.0\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 243 / 5 IDENT. 80
THE SEGMENT START TIME WAS AT 6:15:59.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 65.0%	CIVV -25.0
P1 42.73 (6.198)	P1/PS 0.997	KTHETA 0.371	KRA2 0.523	BKRA2 10.810	KR2 11.108	KC2 0.321	KC3P 0.390
							D2 0.036

60(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.016380 SECONDS

FIGURE G-60 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2, \alpha = -2.0, \beta = 0.0, WAT2 = 65.0\%$

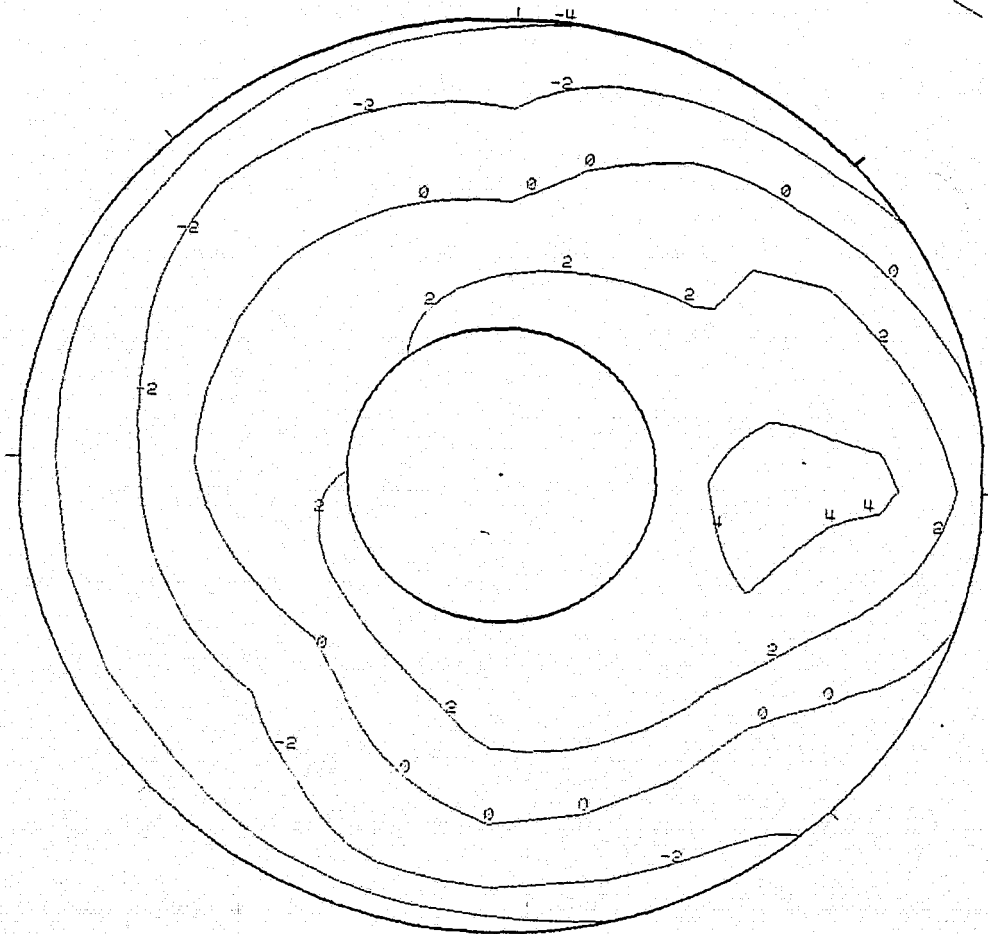
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 5 IDENT. 60
THE SEGMENT START TIME WAS AT 6:15:59.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 65.0%	CIVV -25.0
PI 42.93 (6.227)	PI/PS 1.002	KTHETA 0.354	KRA2 0.467	BKRA2 9.663	KR2 10.023	KC2 0.261	KOSP 0.307
							D2 0.098

60(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
275 Hz



MEAN FACE PRESSURE = 42.93 kPa (6.227 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.004950 SECONDS

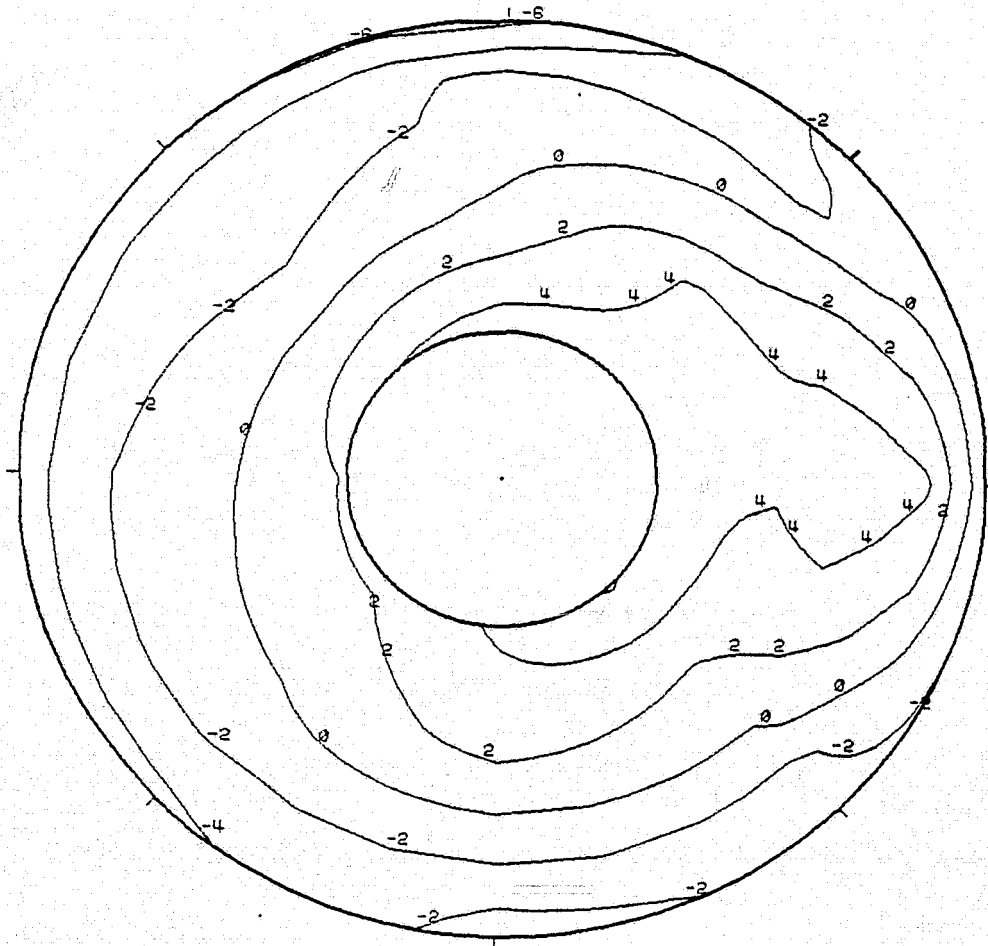
FIGURE G-60 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 65.0 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 5 IDENT. 00
THE SEGMENT START TIME WAS AT 6:15:59.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 65.0%	CIVV -25.0
PI 42.66 (6.188)	PI/PS 0.996	KTHETA 0.382	KRA2 0.500	BKRA2 10.340	KA2 10.723	KC2 0.349	KOSP 0.377
							D2 0.107

**60(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
615 Hz**



MEAN FACE PRESSURE = 42.66 kPa (6.188 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.016335 SECONDS

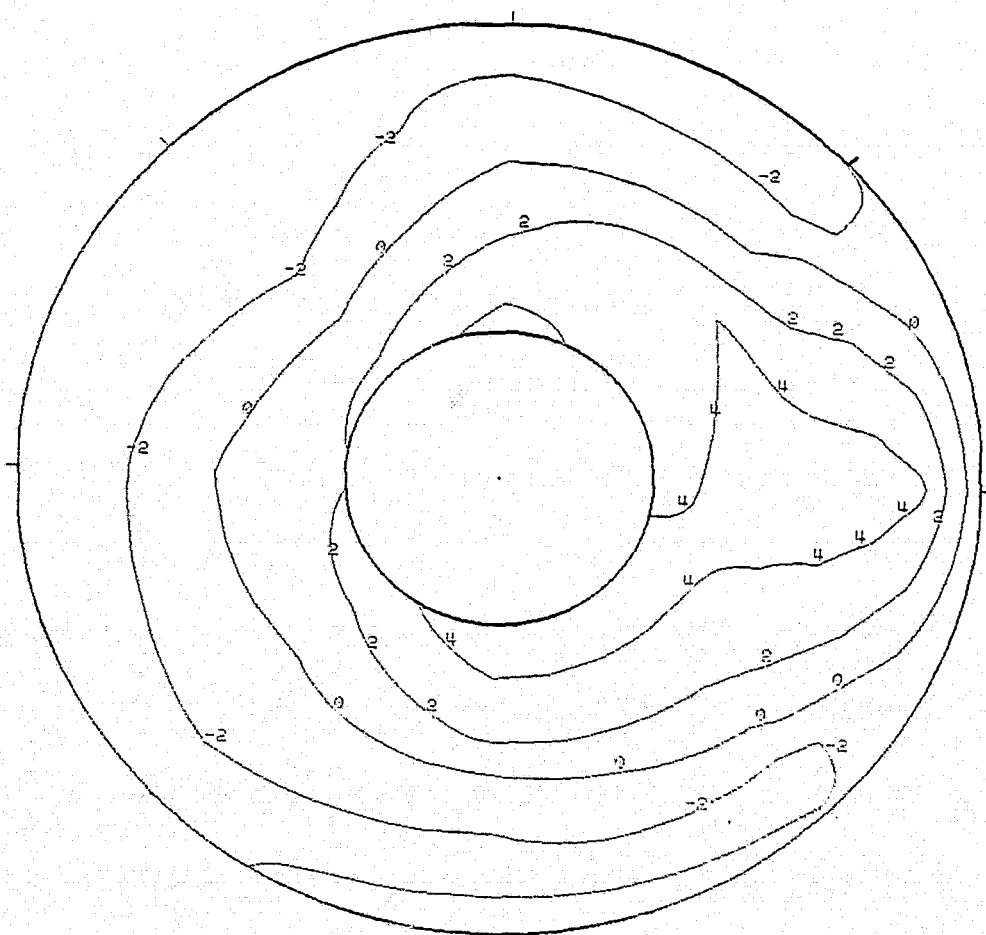
FIGURE G-60 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 65.0\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 5 IDENT. 60
THE SEGMENT START TIME WAS AT 6:15:59.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 65.0%	CIVV -25.0
P1 42.74 (6.199)	P1/PS 0.997	KTHETA 0.380	KRA2 0.483	BKRA2 10.092	KA2 10.452	KC2 0.352	KOSP 0.387
							D2 0.089

60(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
1040 Hz



MEAN FACE PRESSURE = 42.74 kPa (6.199 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.016335 SECONDS

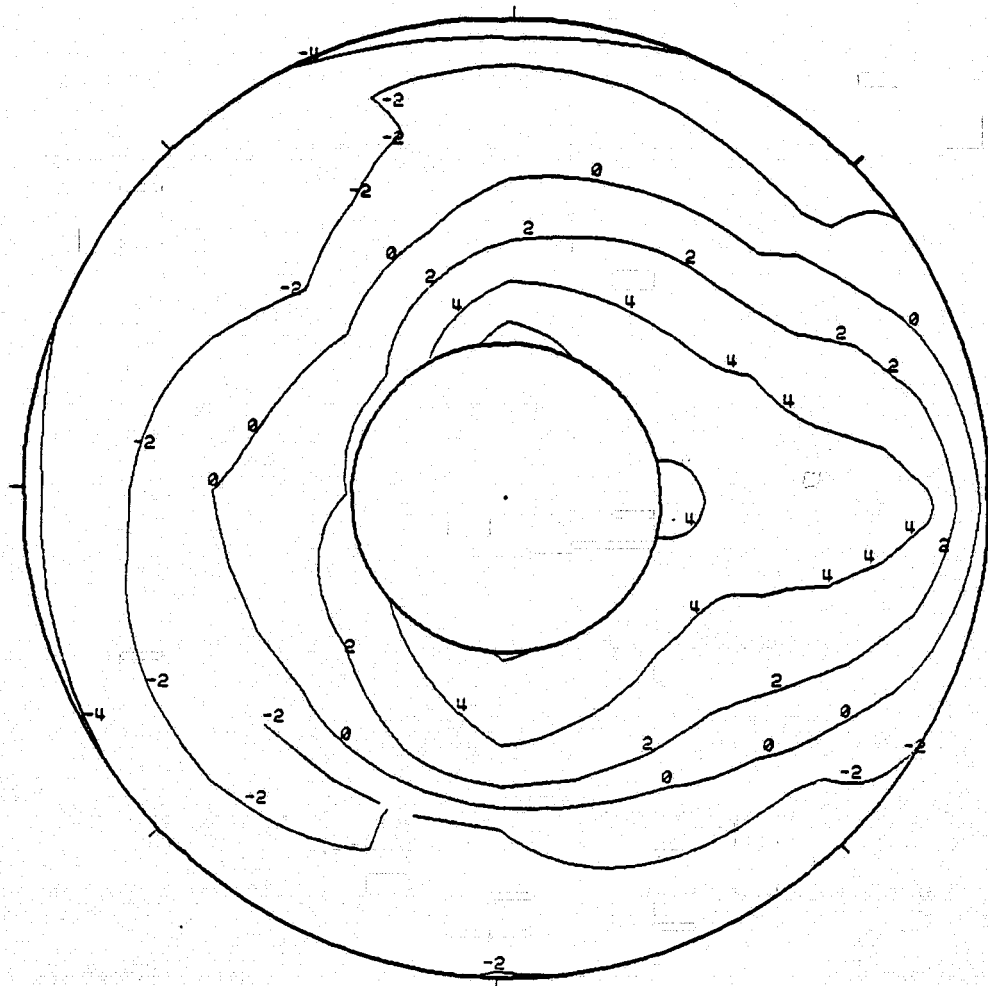
FIGURE G-60 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 65.0 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 5 IDENT. 60
THE SEGMENT START TIME WAS AT 6:15:59.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 65.0%	CIVV -25.0
PI 42.73 (6.198)	P1/PS 0.997	KTHETA 0.371	KRA2 0.523	BKRA2 10.818	KA2 11.188	KC2 0.321	KOSP 0.390
							D2 0.096

60(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
3070 Hz



MEAN FACE PRESSURE = 42.73 kPa (6.198 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.016380 SECONDS

FIGURE G-60 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 65.0\%$

SERIES VIII - NASA Data Study
 Part/Point - 249/9, Ident 61
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00

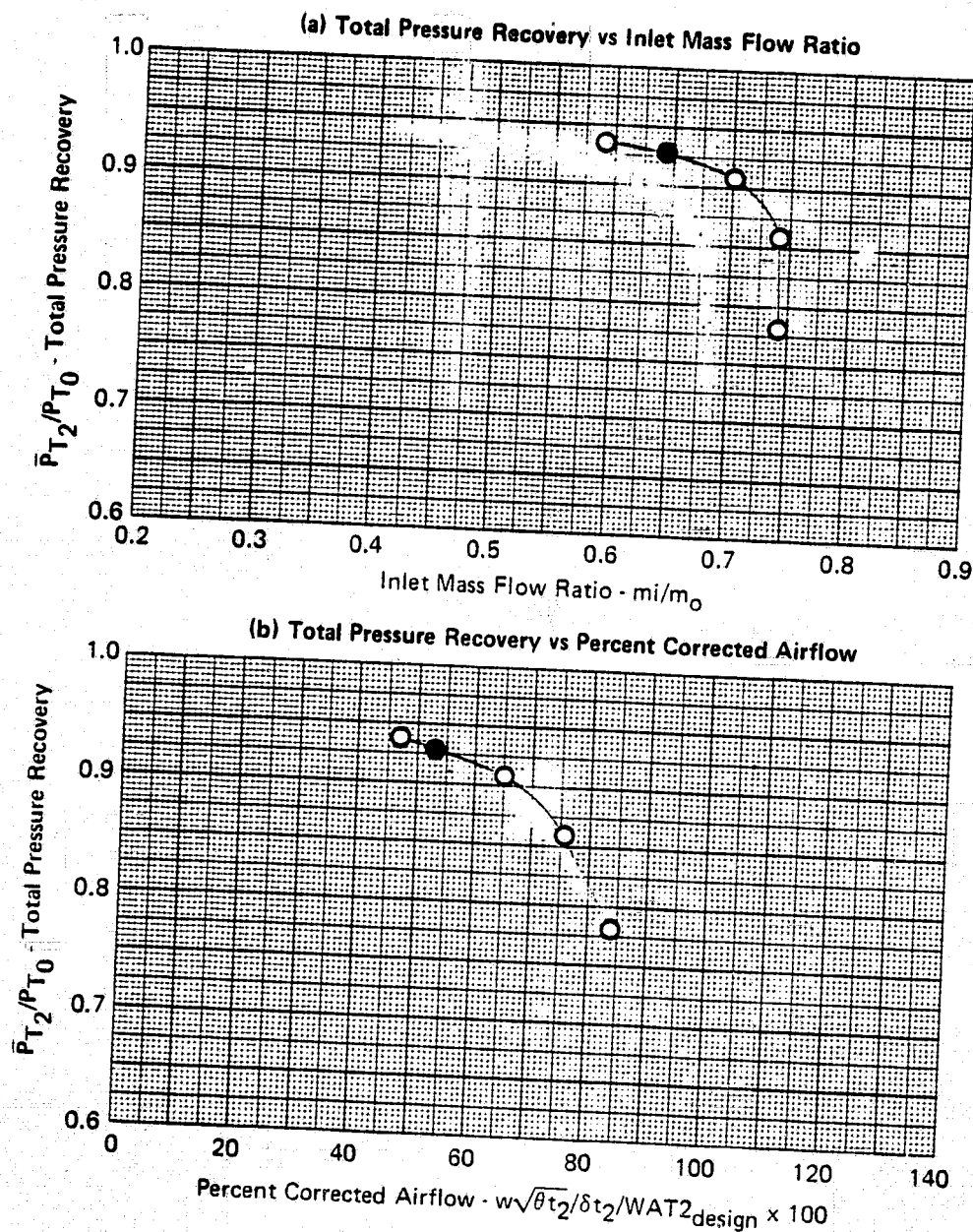
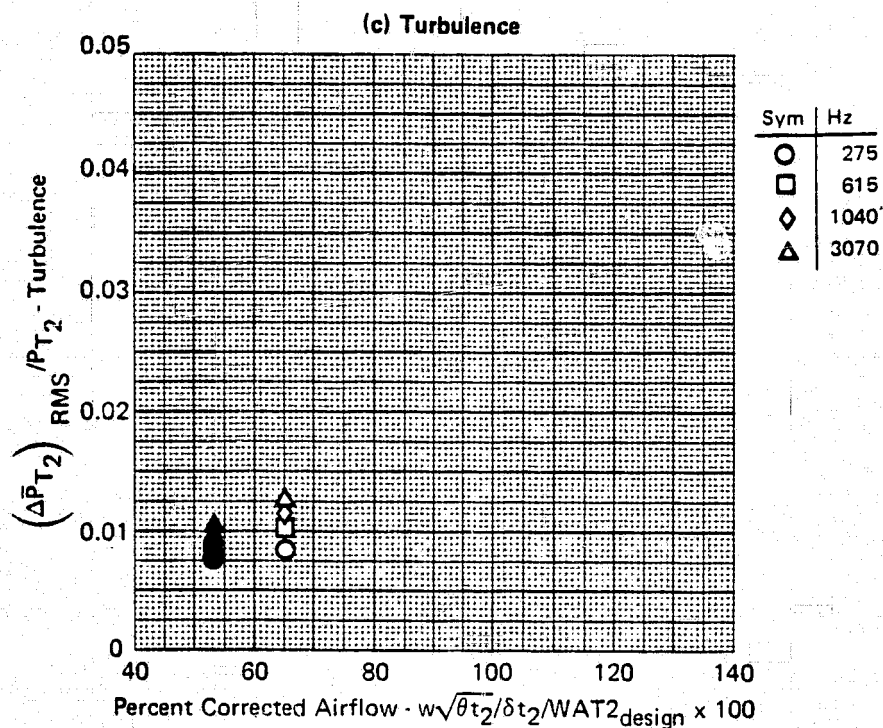


FIGURE G-61
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

GP77-0658-1

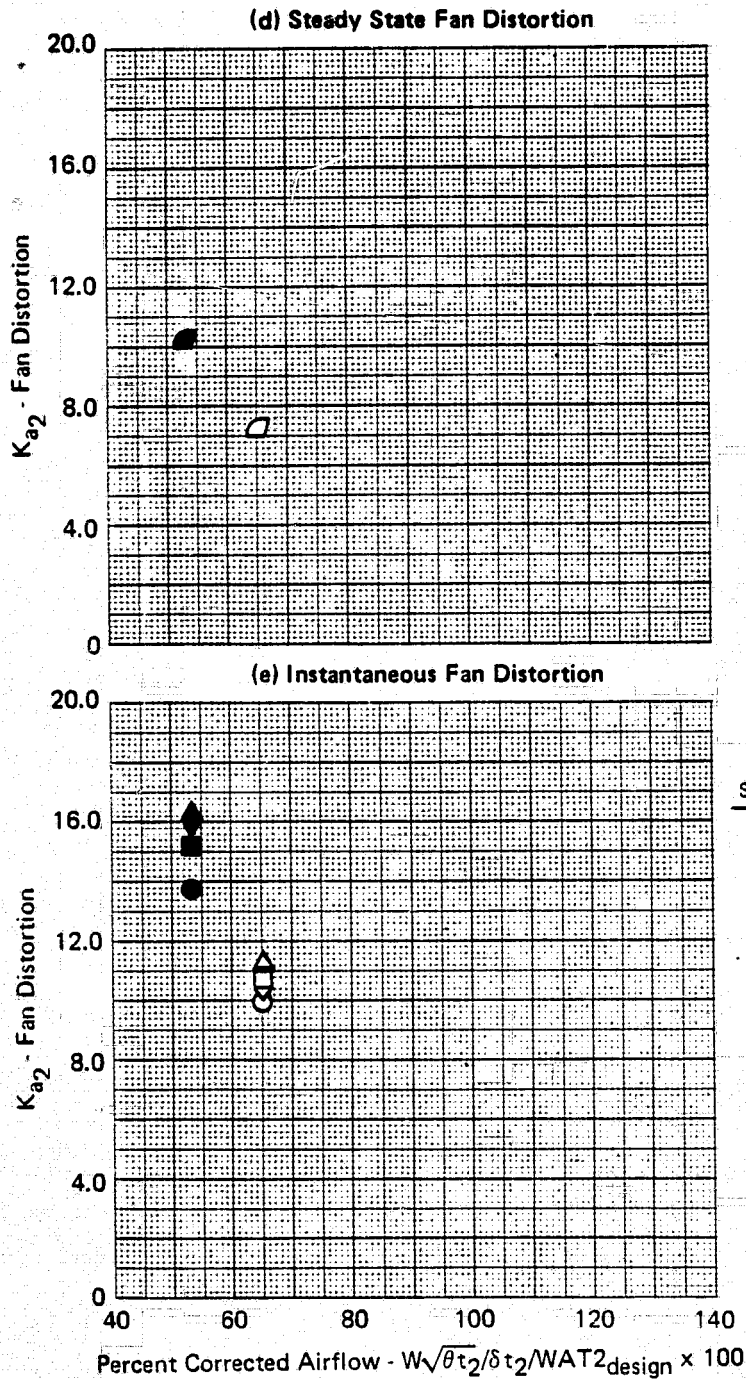
SERIES VIII - NASA Data Study
 Part/Point - 249/9, Ident 61
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00



GP77-0658-5

FIGURE G-61 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

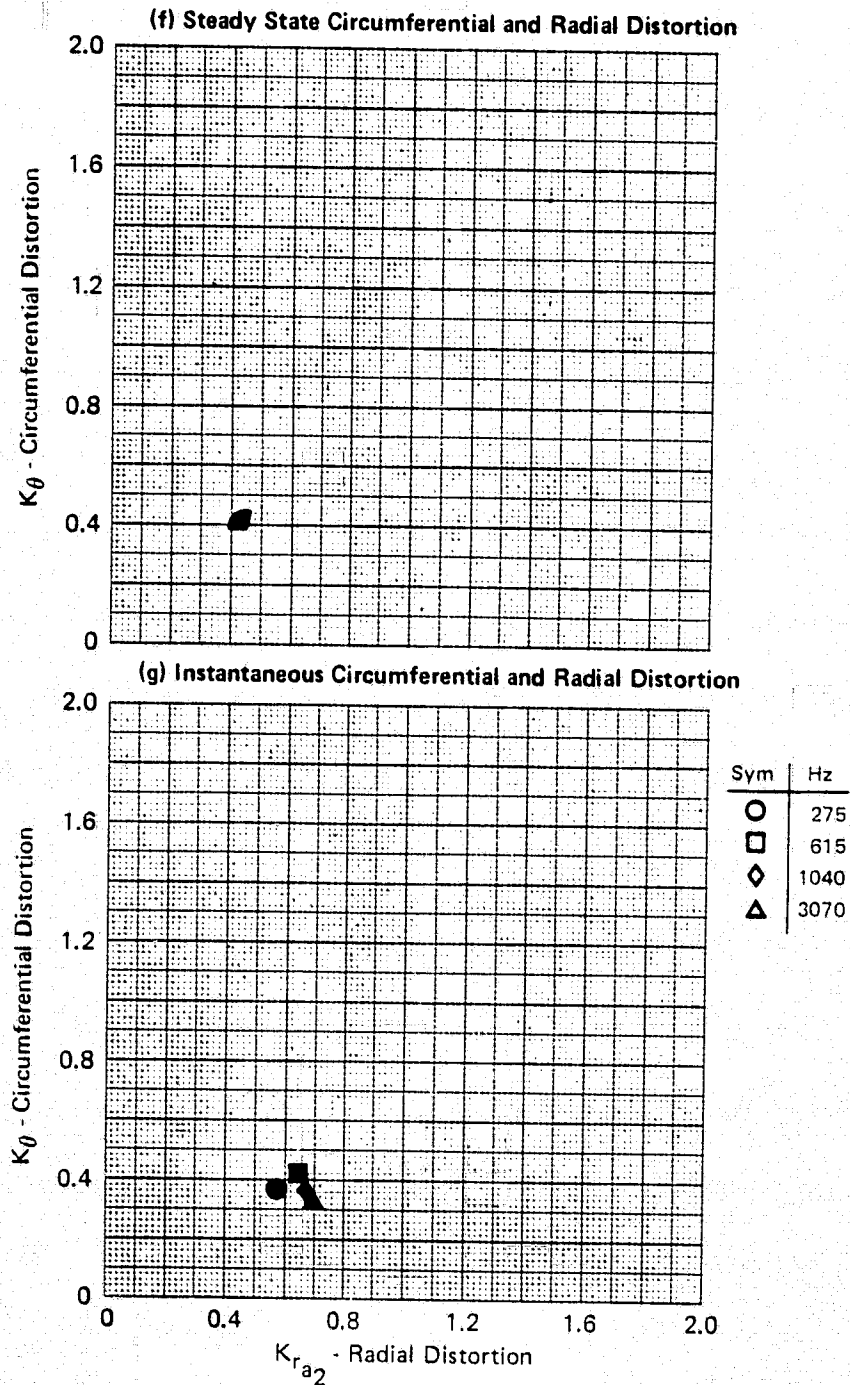
SERIES VIII - NASA Data Study
 Part/Point - 249/9, Ident 61
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00



GP77-0658-3

FIGURE G-61 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

SERIES VIII - NASA Data Study
 Part/Point - 249/9, Ident 61
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00



GP77-0658-2

FIGURE G-61 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

SERIES VIII - NASA Data Study
 Part/Point - 249/9, Ident 61
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00

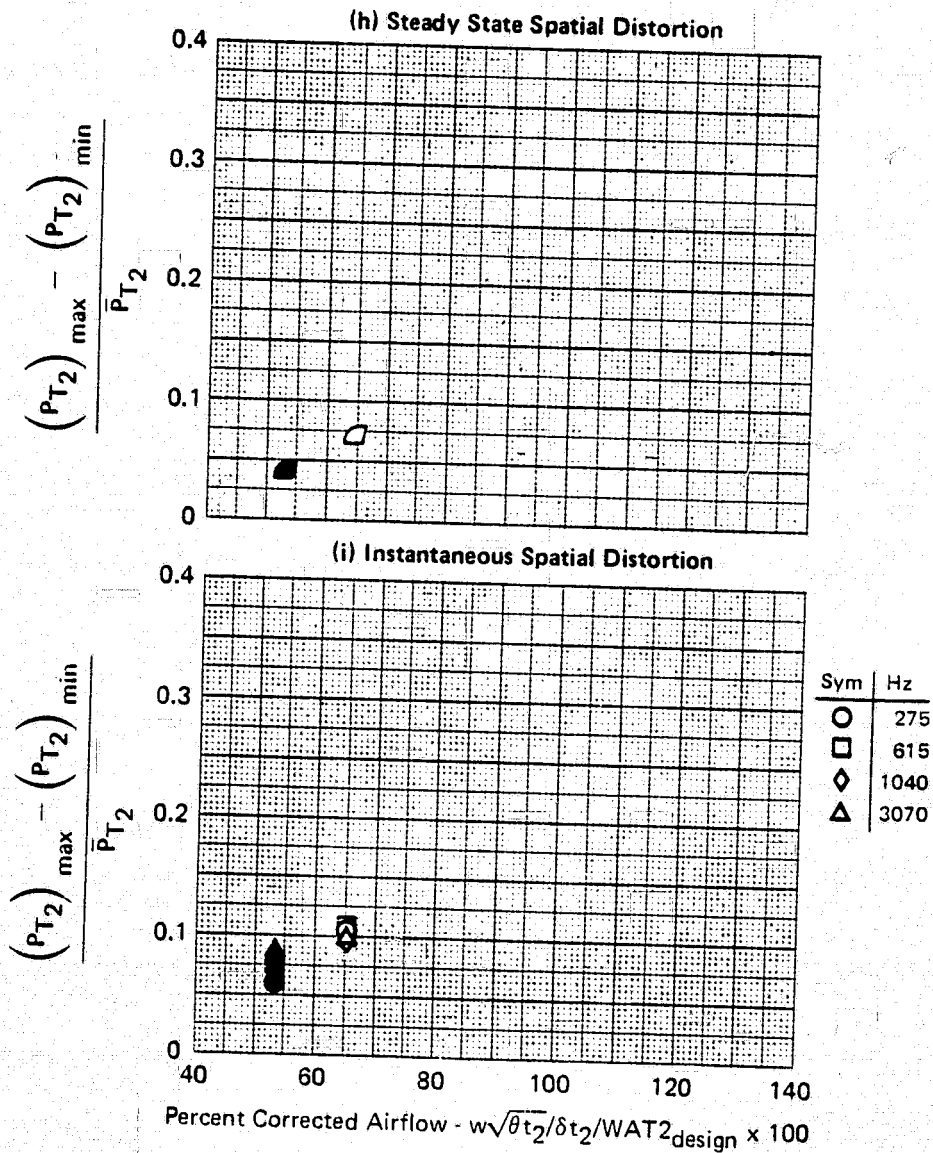


FIGURE G-61 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

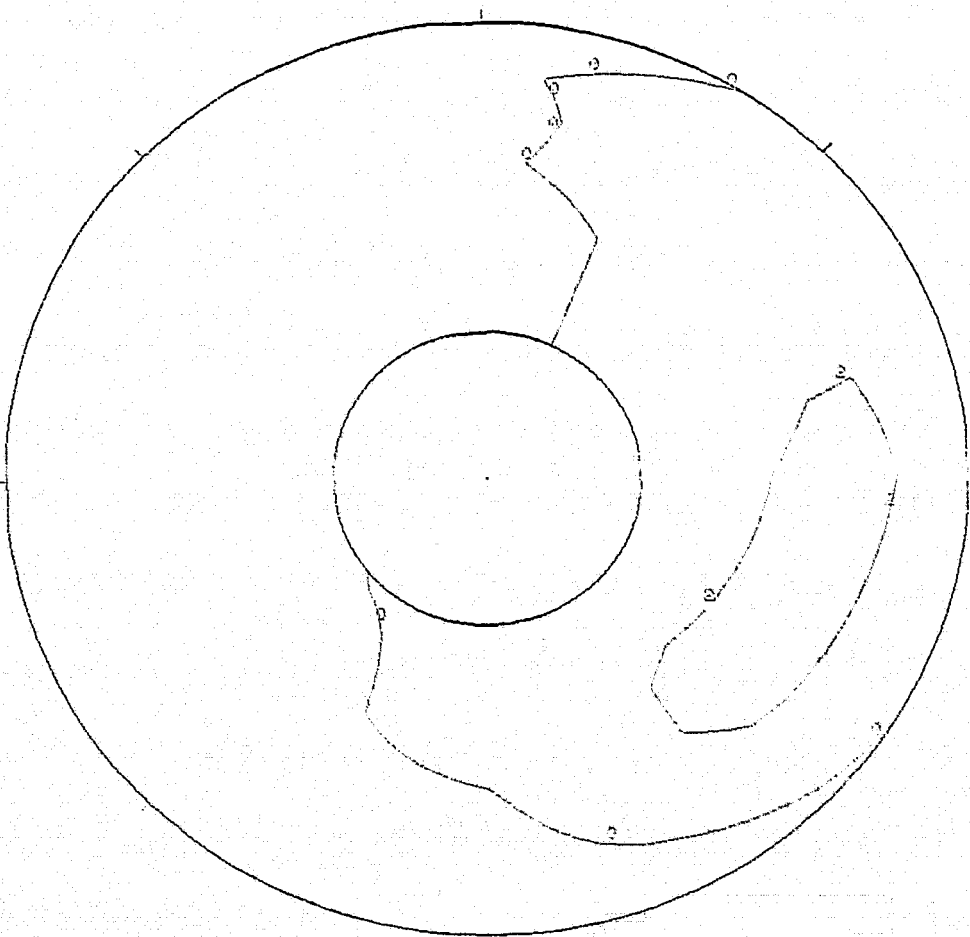
GP77-0658-4

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 9 IDENT. **61**
 THE SEGMENT START TIME WAS AT 6:21:10.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 52.9%	CIVV -25.0
P1 43.85 (6.360)	P1/PS 1.000	KTHETA 0.409	KPA2 0.424	BKPA2 9.334	KPA2 10.243	KO2 0.243	KESP 0.403
							D2 0.041

61 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 43.85 kPa (6.360 PSIA)
 NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
 FROM MEAN FACE PRESSURE.

FIGURE G-61 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 9 IDENT. 61
THE SEGMENT START TIME WAS AT 6:21:10.045

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

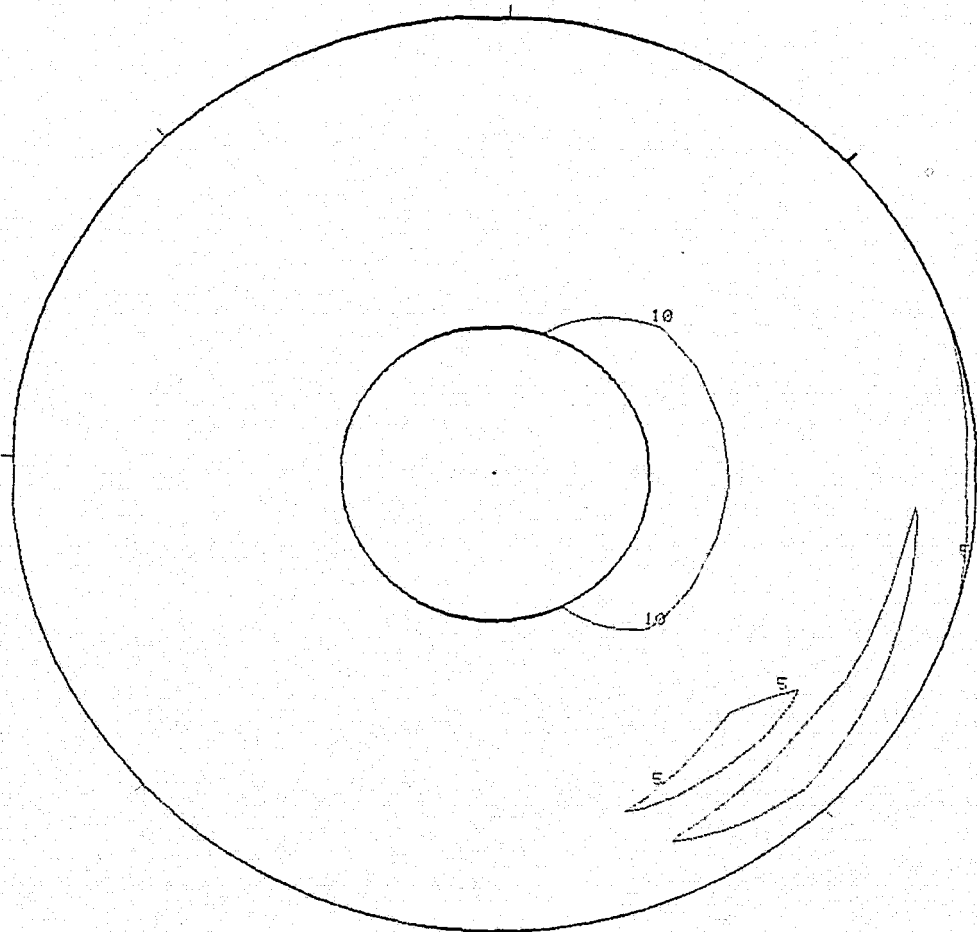
DELTA3
35.0

BYPASS
0.07742 (120.0)

WAT2
52.9%

CIVV
-25.0

61(k) Turbulence Contour
275 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00760

FIGURE G-61 (Continued)

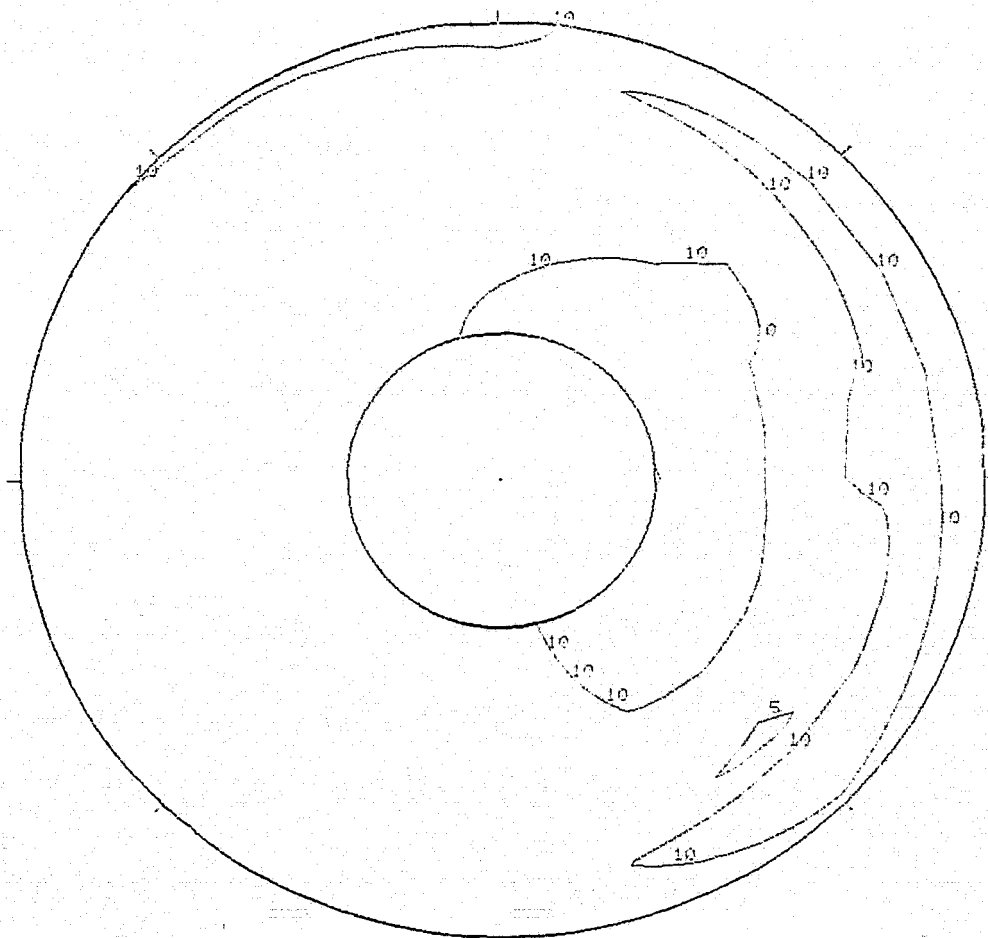
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 52.9 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 3 IDENT. 61
THE SEGMENT START TIME WAS AT 8-21-10.025

MACH 2.2	ALPHA -2	BETA 0	SWO 11.0	DELTA2 13.10	BYPASS 0.07742 (120.0)	WAT2 52.9%	CIVV -25.0
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61(I) Turbulence Contour 615 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00882

FIGURE G-61 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 9 IDENT. 61
THE SEGMENT START TIME WAS AT 6:21:10.045

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

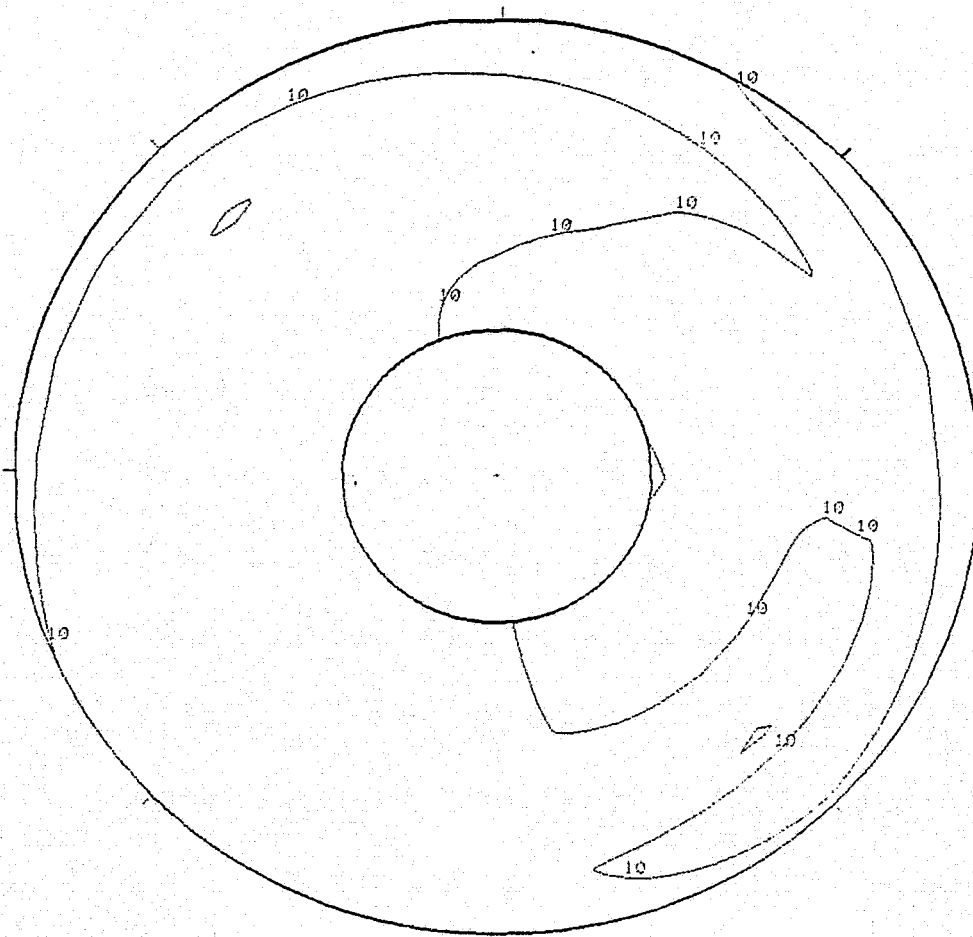
DELTA3
25.0

BYPASS
0.07742 (120.0)

WAT2
52.9%

CIVV
-25.0

61(m) Turbulence Contour 1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00947

FIGURE G-61 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 52.9 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 248 / 9 IDENT. 61
THE SEGMENT START TIME WAS AT 6:21:10.045

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

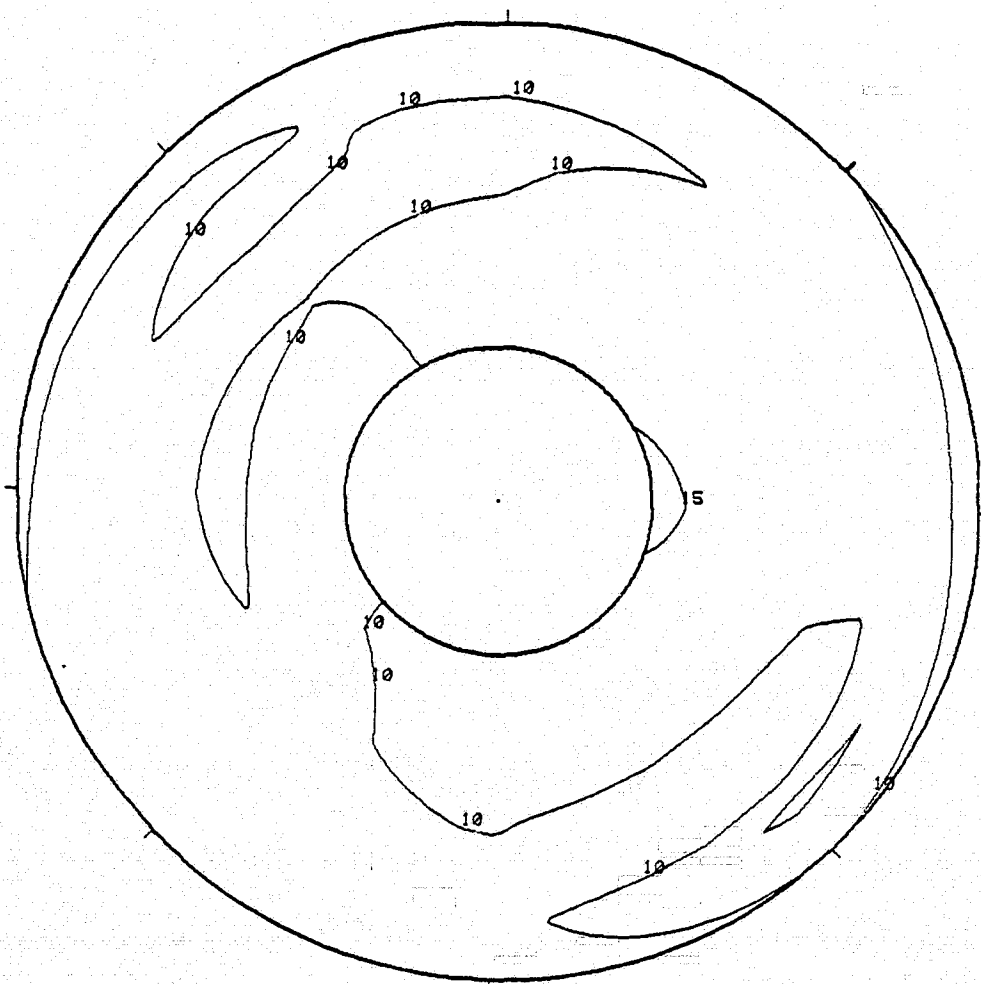
DELTA3
25.0

BYPASS
0.07742 (120.0)

WAT2
52.9%

CIVV
-25.0

61(n) Turbulence Contour 3070 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01043

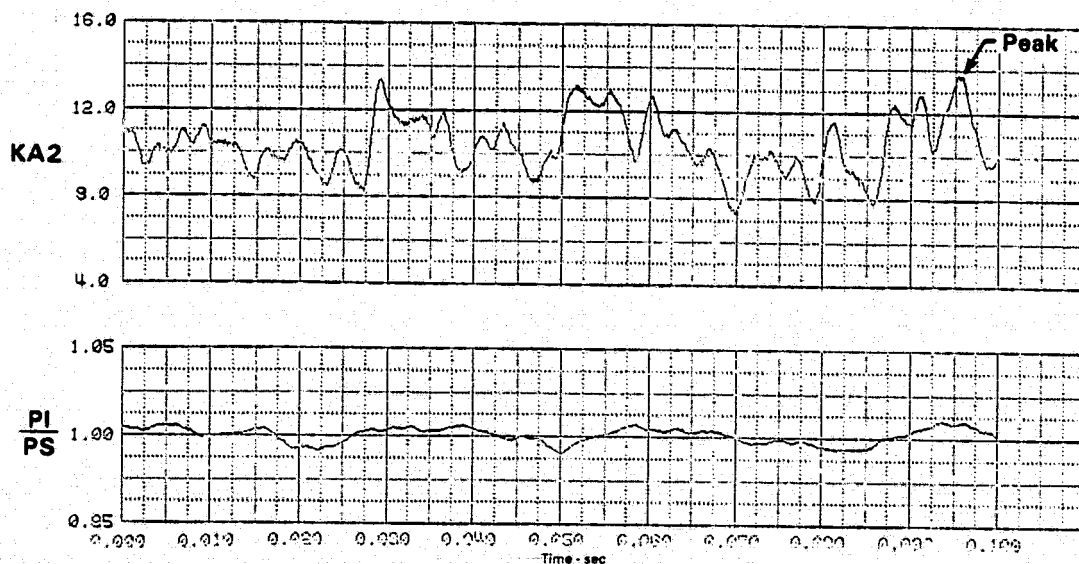
FIGURE G-61 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 9 IDENT. 61
THE SEGMENT START TIME WAS AT 6:21:10.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 35.0	SVR038 0.07742 (120.0)	WAT2 52.9%	CIVV -25.0
ρ_1 44.27 (6.421)	PI/PS 1.010	KTHETA 0.373	KP02 0.576	BKPA2 13.945	KP2 13.738	KC2 0.233	KQ2P 0.330
							D2 0.059

61(o) Time History Plots
275 Hz



PEAK AT TIME = 0.095865 SECONDS

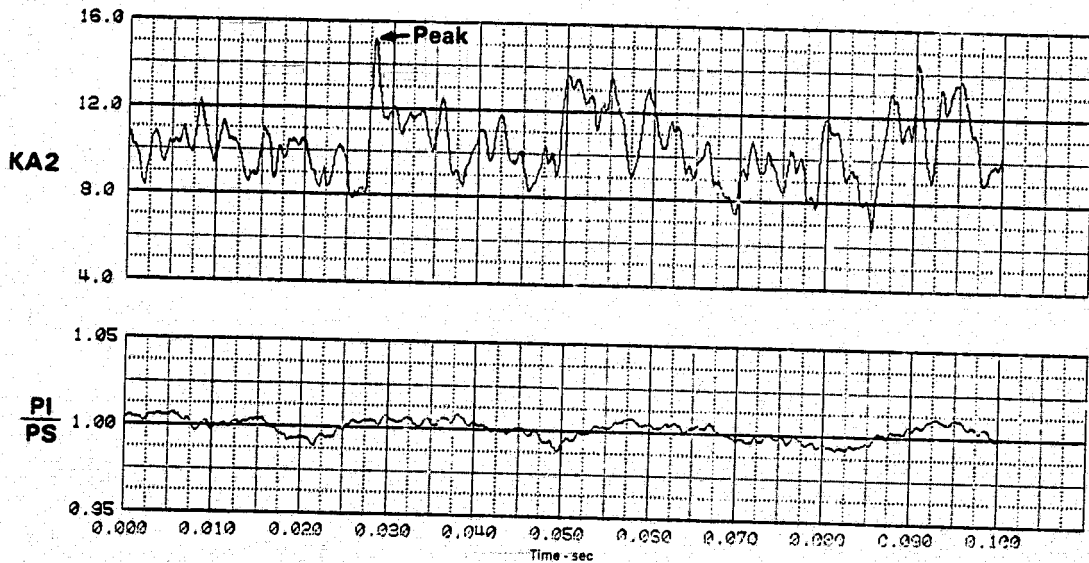
FIGURE G-61 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2, \alpha = -2.0, \beta = 0.0, WAT2 = 52.9\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 9 IDENT. 61
THE SEGMENT START TIME WAS AT 6:21:10.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	EXF033 0.07742 (120.0)	WAT2 52.9%	CIVV -25.0
PI 44.04 (6.388)	PI/P3 1.004	KTHETA 0.417	KPA2 0.638	BKFA2 14.793	KPA2 15.735	KCB 0.142	KD3P 0.037
							D2 0.076

61(p) Time History Plots
615 Hz



PEAK AT TIME = 0.028050 SECONDS

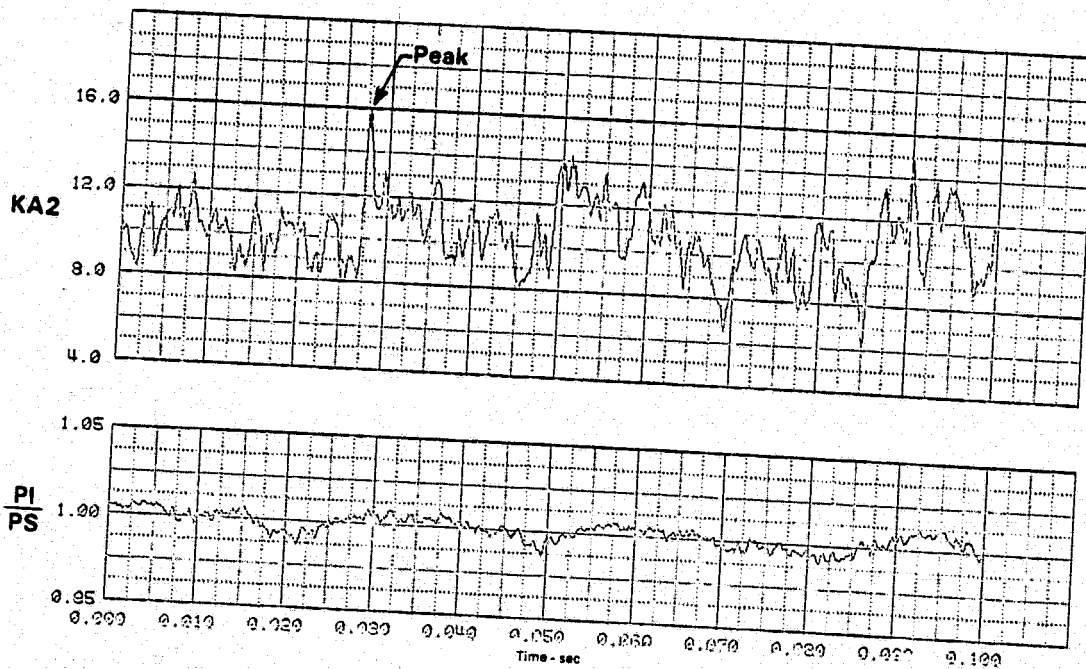
FIGURE G-61 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 52.9%

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 240 / 0 IDENT. 61
THE SEGMENT START TIME WAS AT 6:21:10.045

MOCH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 52.9%	CIVV -25.0
PI 44.02 (6.385)	PI/PS 1.004	KTHETA 0.362	KPA2 9.872	BKPA2 15.541	KAP 15.343	KQ2 0.350	KQSP 0.432
							D2 0.079

61(q) Time History Plots 1040 Hz



PEAK AT TIME = 0.027720 SECONDS

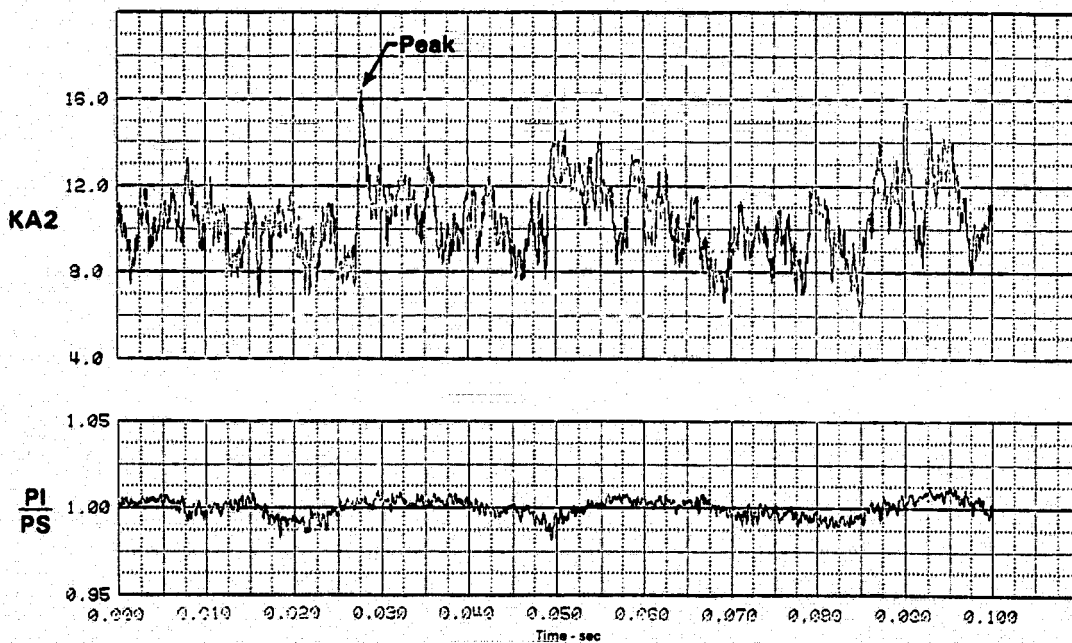
FIGURE G-61 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 243 / 3 IDENT. 61
THE SEGMENT START TIME WAS AT 6:21:10.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 52.9%	CIVV -25.0
P1 44.04 (6.388)	PI/PS 1.004	KTHETA 0.324	KRA2 0.693	BKRA2 16.093	KA2 16.416	KC2 0.397	KOSP 0.408
							D2 0.076

61(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.027720 SECONDS

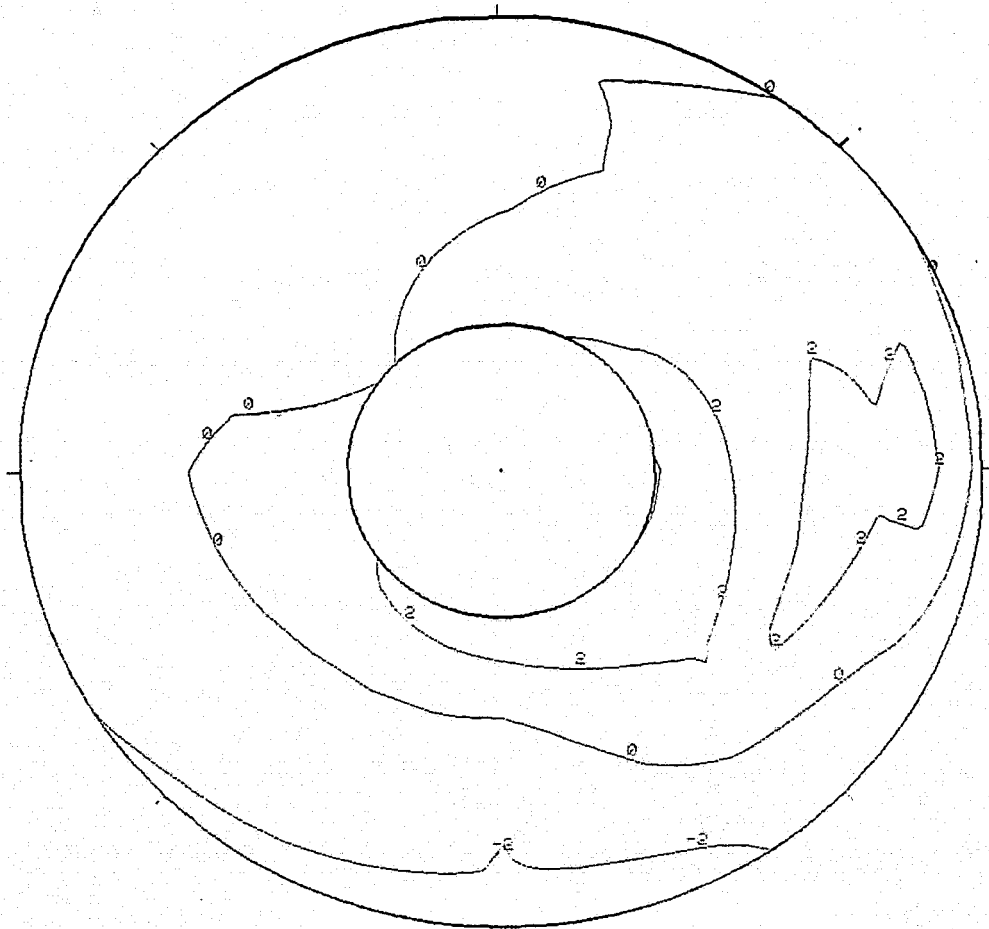
FIGURE G-61 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 9 IDENT. 61
THE SEGMENT START TIME WAS AT 6:21:10.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 52.9%	CIVV -25.0
PI 44.27 (6.421)	PI/PS 1.010	KTHETA 0.373	KRA2 0.576	BKRA2 13.965	KAP 13.738	KCS 0.238	KOSP 0.330
							D2 0.059

**61(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
275 Hz**



MEAN FACE PRESSURE = 44.27 kPa (6.421 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.095865 SECONDS

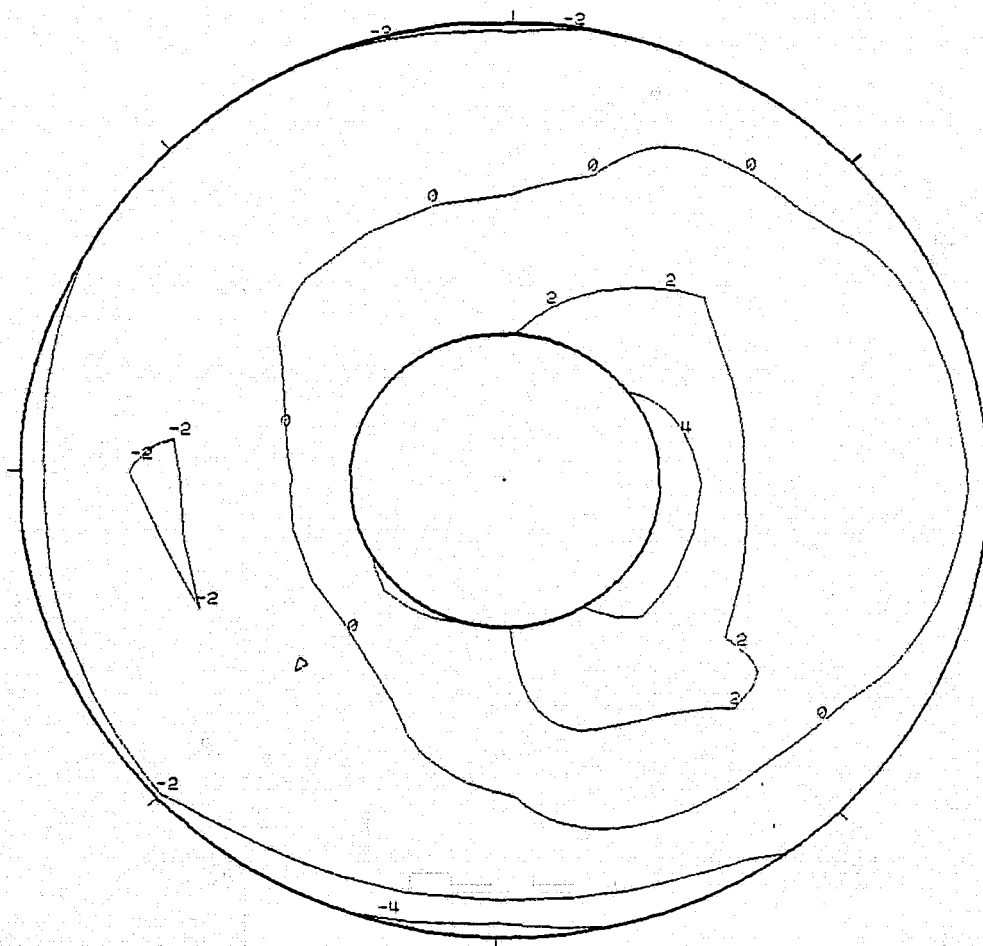
FIGURE G-61 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 243 / 9 IDENT. 61
THE SEGMENT START TIME WAS AT 6:21:10.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 52.9%	QIVV -35.9
P1 44.04 (6.388)	P1/PS 1.004	KTHETA 0.417	KRA2 0.626	BKRA2 14.763	KA2 15.185	KC2 0.442	KOSP 0.437
							D2 0.076

**61(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
615 Hz**



MEAN FACE PRESSURE = 44.04 kPa (6.388 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.028050 SECONDS

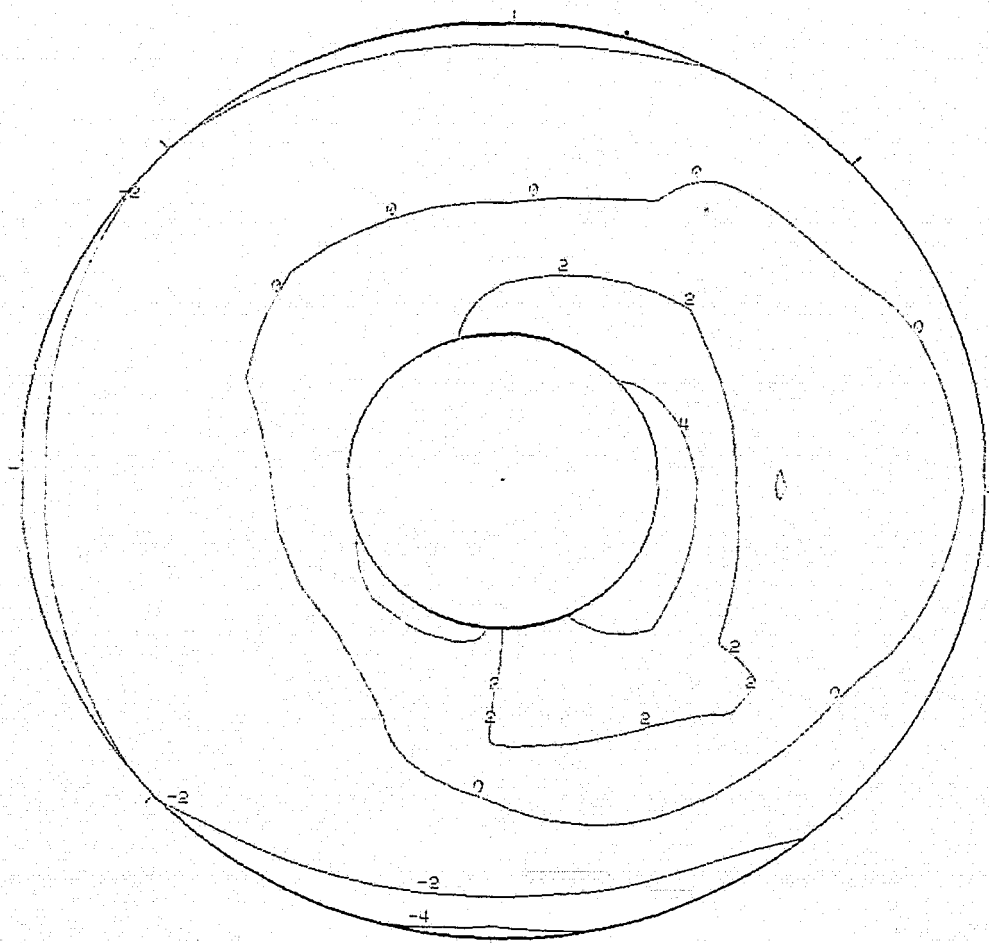
FIGURE G-61 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / A IDENT. 61
THE SEGMENT START TIME WAS AT 6:21:10.245

MACH 2.2	ALPHA -2	BETA 0	PHI -4.0	DELTA2 25.0	BYPASS 0.07742 (120.0)	WAT2 52.9%	CIVV -25.0
P1 44.02 (6.385)	P1/P3 1.004	KTHETA 0.352	KRQ2 0.572	BKRA2 15.531	KR2 15.943	KC2 0.330	KOSP 0.432
							D2 0.079

**61(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
1040 Hz**



MEAN FACE PRESSURE = 44.02 kPa (6.385 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.027720 SECONDS

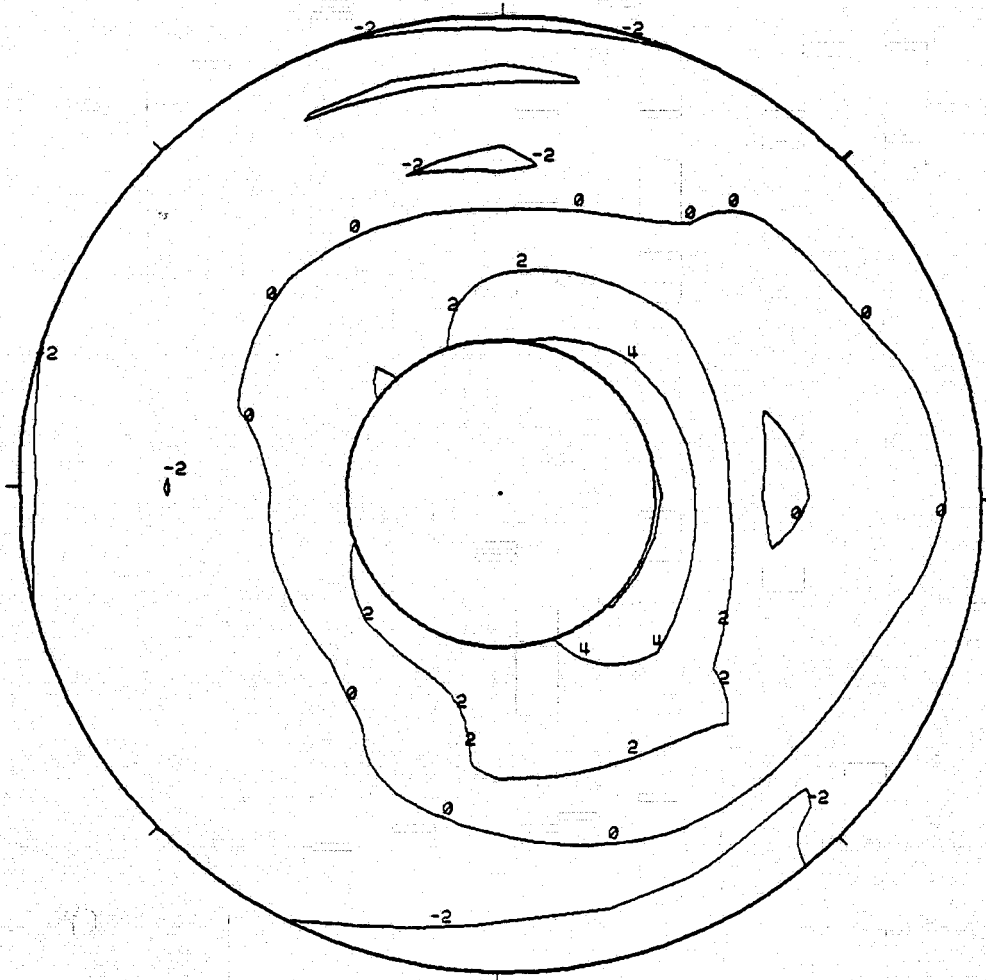
FIGURE G-61 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 249 / 9 IDENT. 61
THE SEGMENT START TIME WAS AT 6:21:10.045

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 52.9%	C1VV -25.0
PI 44.04 (6.388)	P1/PS 1.004	KTHETA 0.324	KRA2 0.693	BKRA2 16.093	KA2 16.416	KC2 0.397	KOSP 0.408
							D2 0.076

61(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
3070 Hz



MEAN FACE PRESSURE = 44.04 kPa (6.388 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.027720 SECONDS

FIGURE G-61 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 52.9\%$

FSCP - NASA Data Study
 Part/Point - 385/5, Ident 62
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00

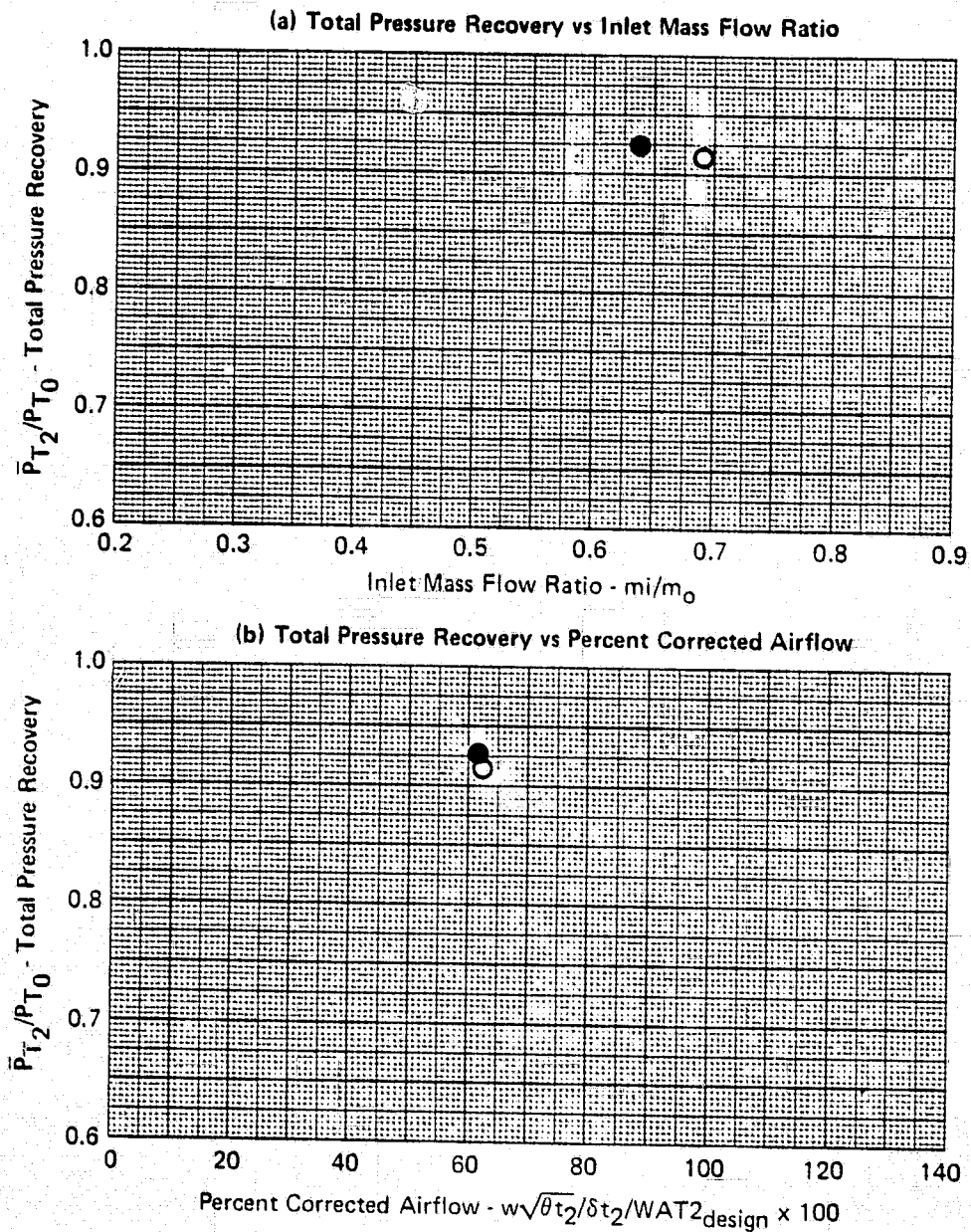
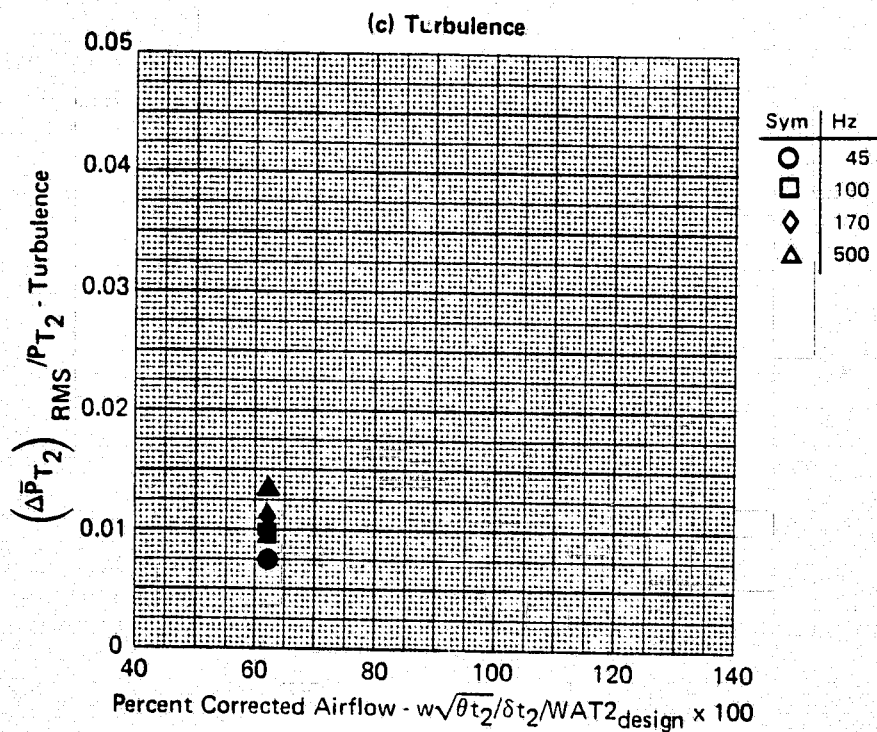


FIGURE G-62
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 61.7\%$

GP77-0658-1

FSCP - NASA Data Study
 Part/Point - 385/5, Ident 62
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00

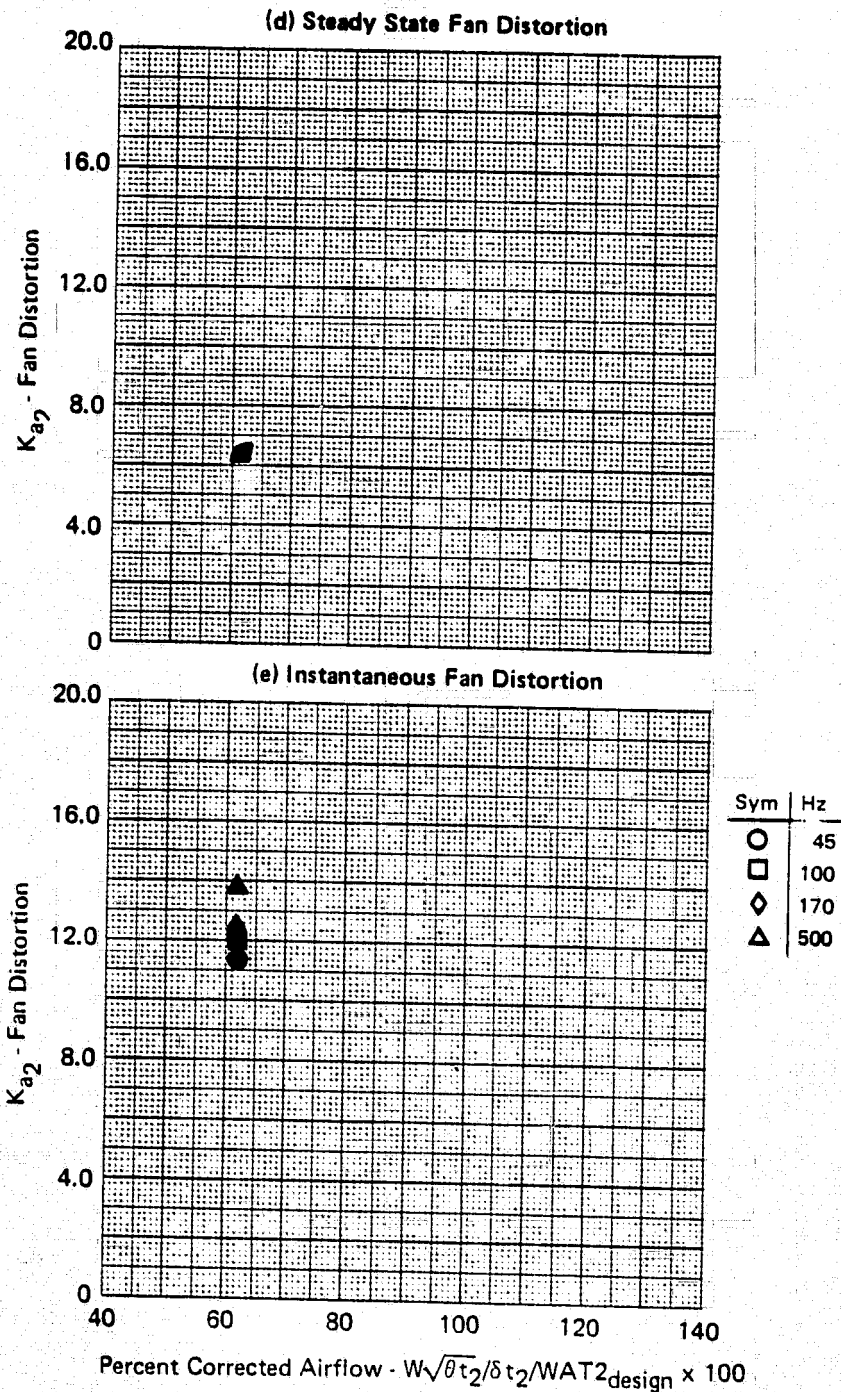


GP77-0658-5

FIGURE G-62 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 61.7\%$

ORIGINAL PAGE IN
 OF POOR QUALITY

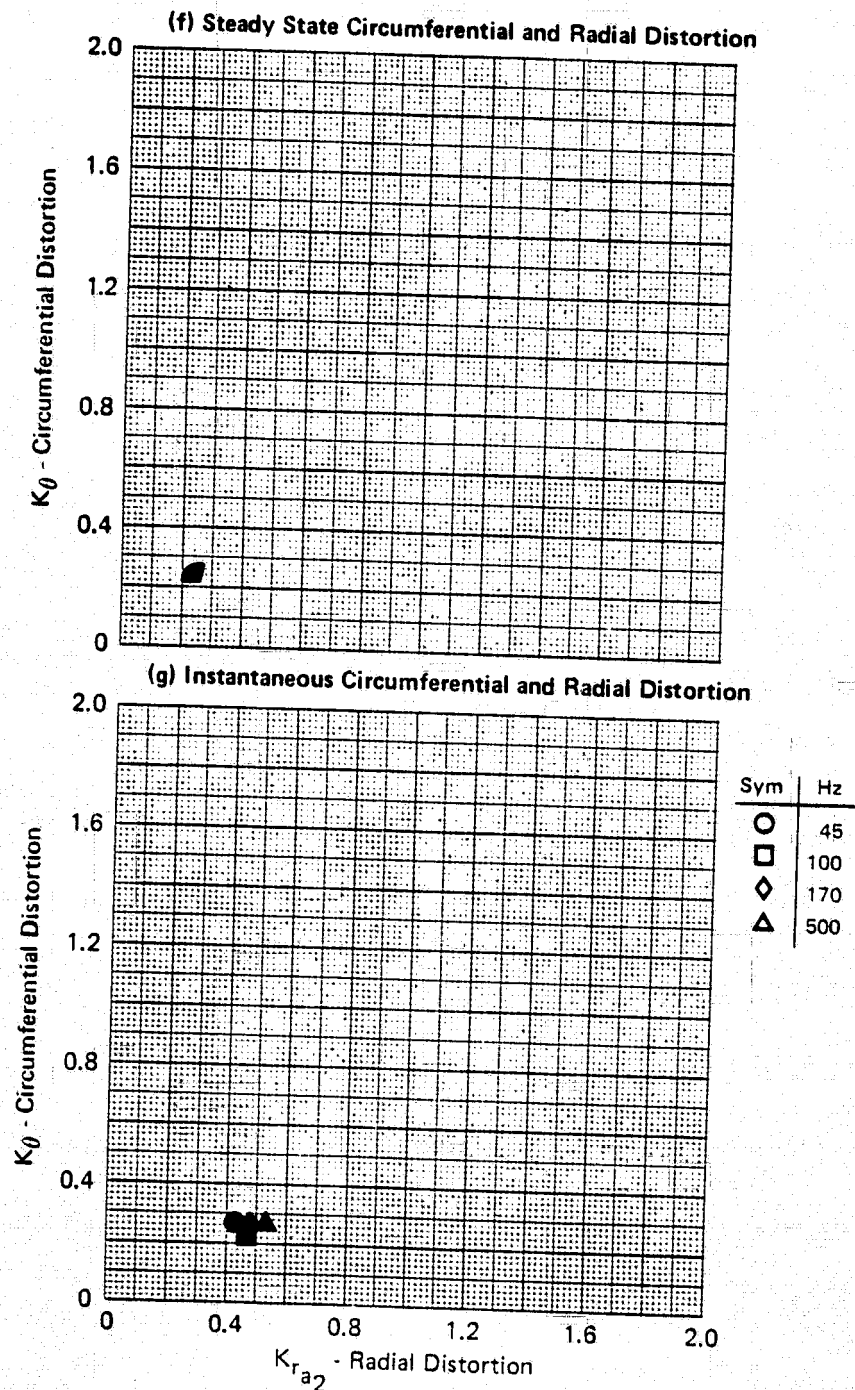
FSCP - NASA Data Study
 Part/Point - 385/5, Ident 62
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00



GP77-0658-3

FIGURE G-62 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 61.7\%$

FSCP - NASA Data Study
 Part/Point - 385/5, Ident 62
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.0) -25.00



GP77-0658-2

FIGURE G-62 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 61.7 %

ORIGINAL PAGE IS
 OF POOR QUALITY

FSCP - NASA Data Study
Part/Point - 385/5, Ident 62

RHO DELTA3 BYPASS CIVV
-4.0 25.0 0.077(120.0) -25.00

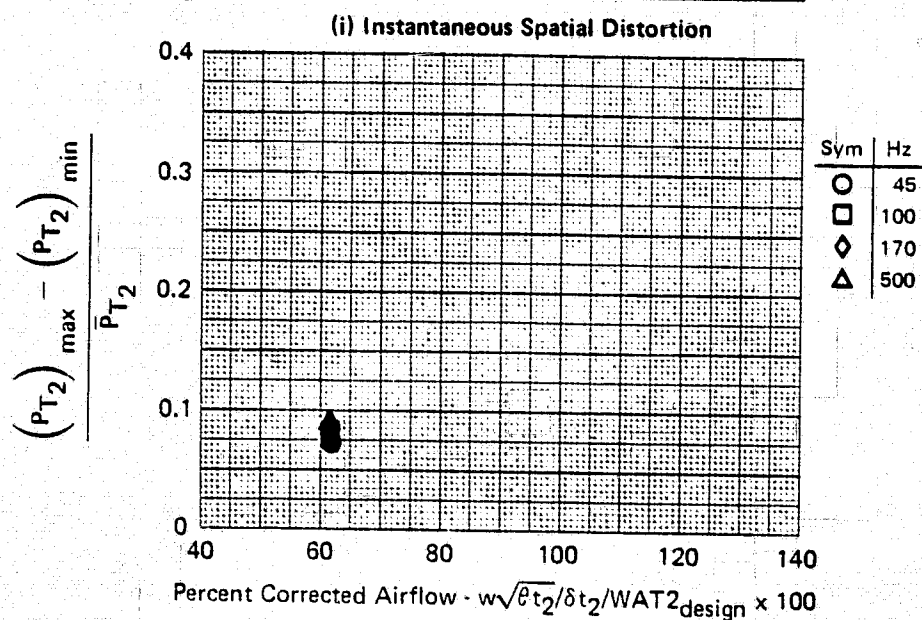
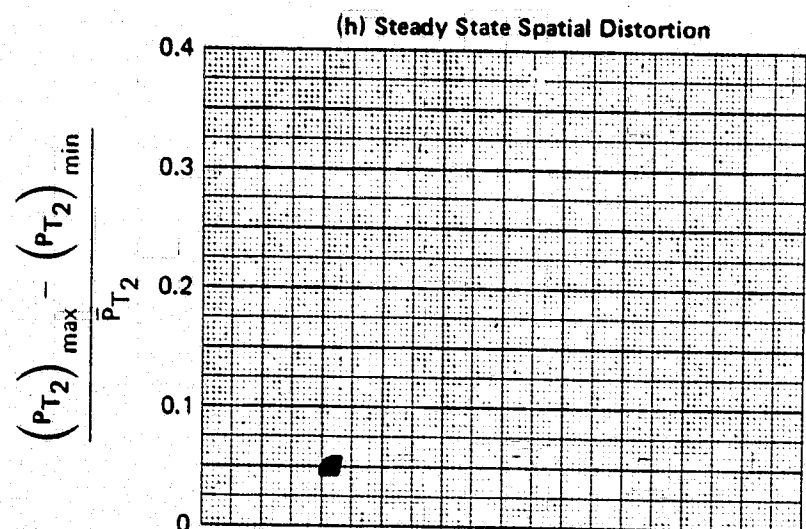


FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 61.7\%$

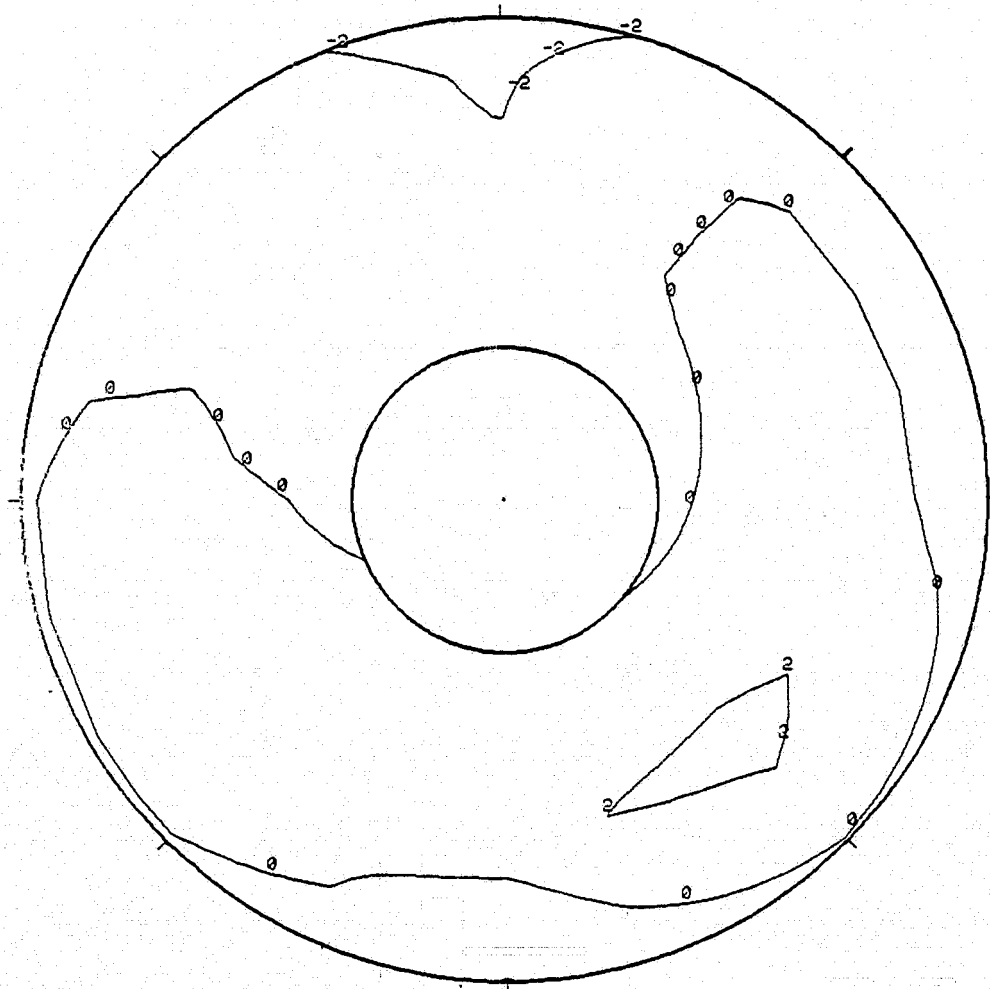
GP77-0858-4

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. **62**
 THE SEGMENT START TIME WAS AT 1:32:36.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 61.7%	CIVV -25.0
PI 44.42 (6.443)	PI/PS 1.000	KTHETA 0.228	KRA2 0.239	BKRA2 6.187	KA2 6.415	KC2 0.269	KESP 0.247
							D2 0.049

62 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 44.42 kPa (6.443 PSIA)
 NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
 FROM MEAN FACE PRESSURE.

FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 61.7 %

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. 62
THE SEGMENT START TIME WAS AT 1:32:36.091

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

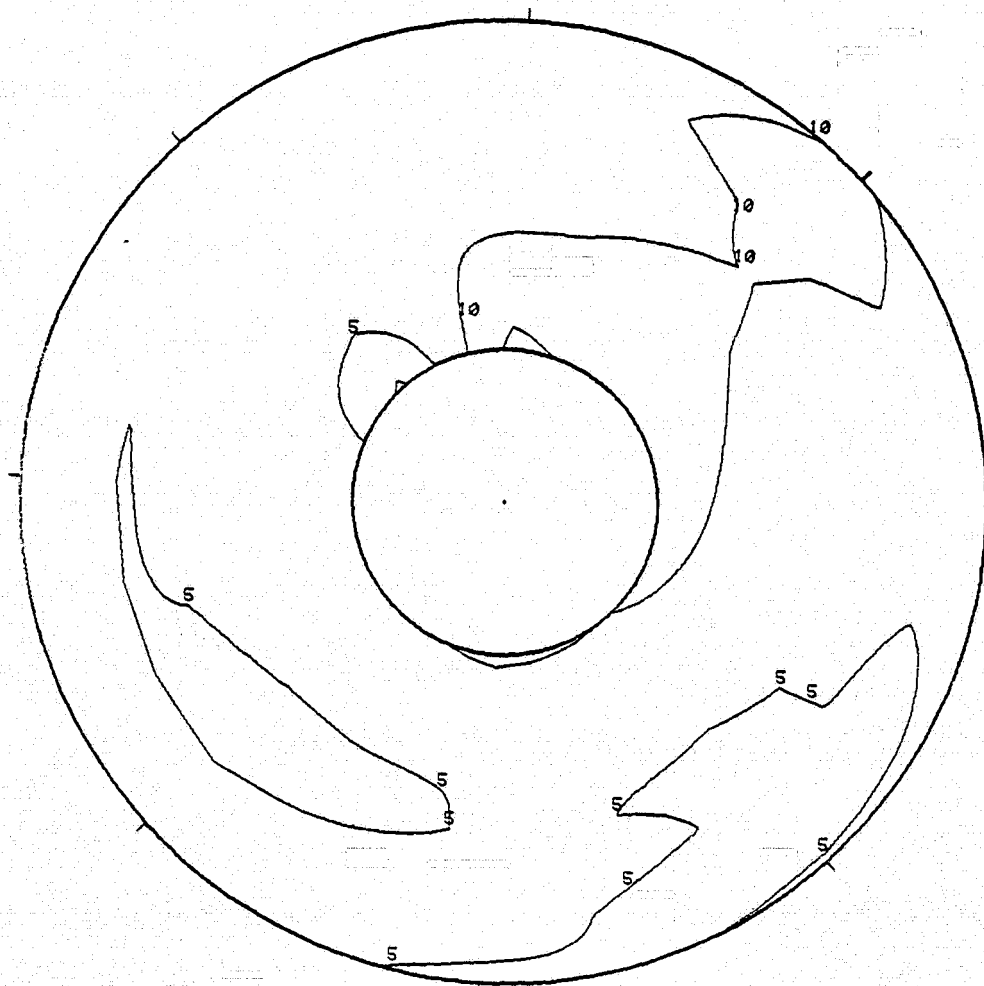
DELTA3
25.0

BYPASS
0.07742 (120.0)

WAT2
61.7%

CIVV
-25.0

62(k) Turbulence Contour 45 Hz



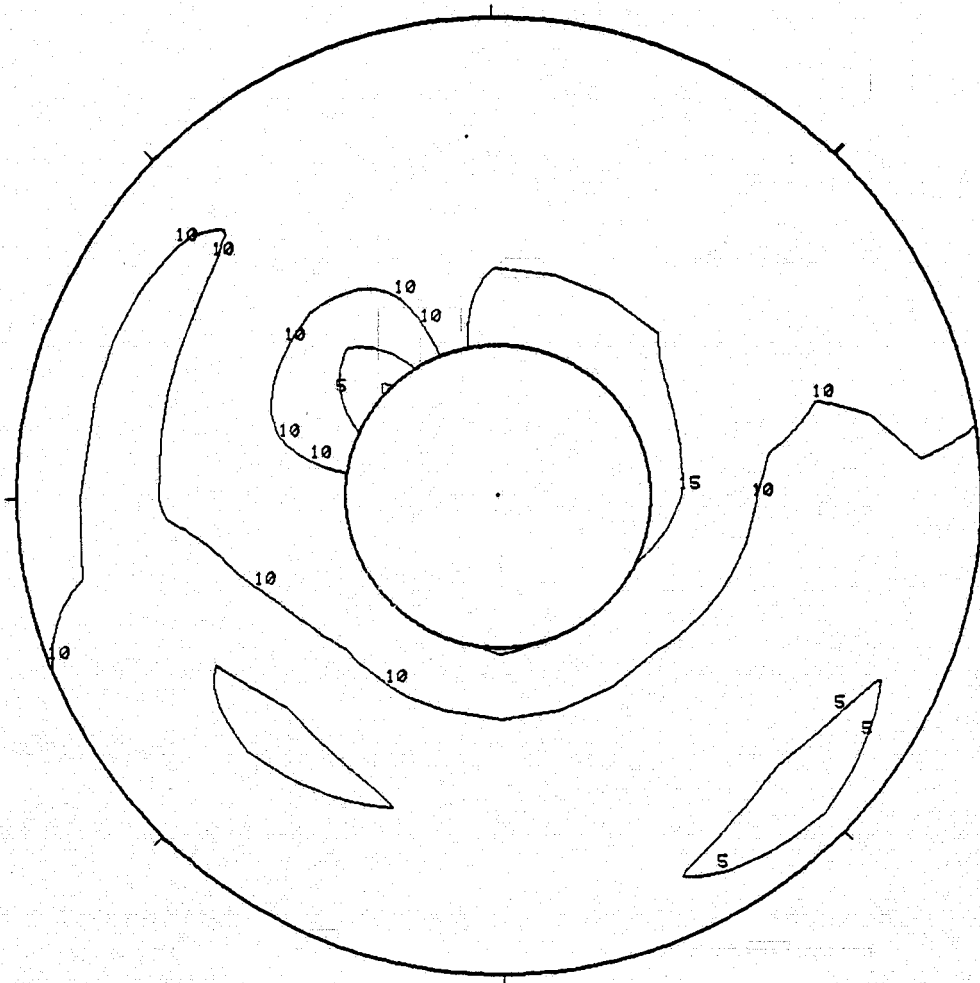
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00742
FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 61.7\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. 62
THE SEGMENT START TIME WAS AT 1:32:36.091

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
2.2	-2	0	-4.0	25.0	0.07742 (120.0)	61.7%	-25.0

62(I) Turbulence Contour 100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00971

FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 61.7\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. 62
THE SEGMENT START TIME WAS AT 1:32:36.092

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

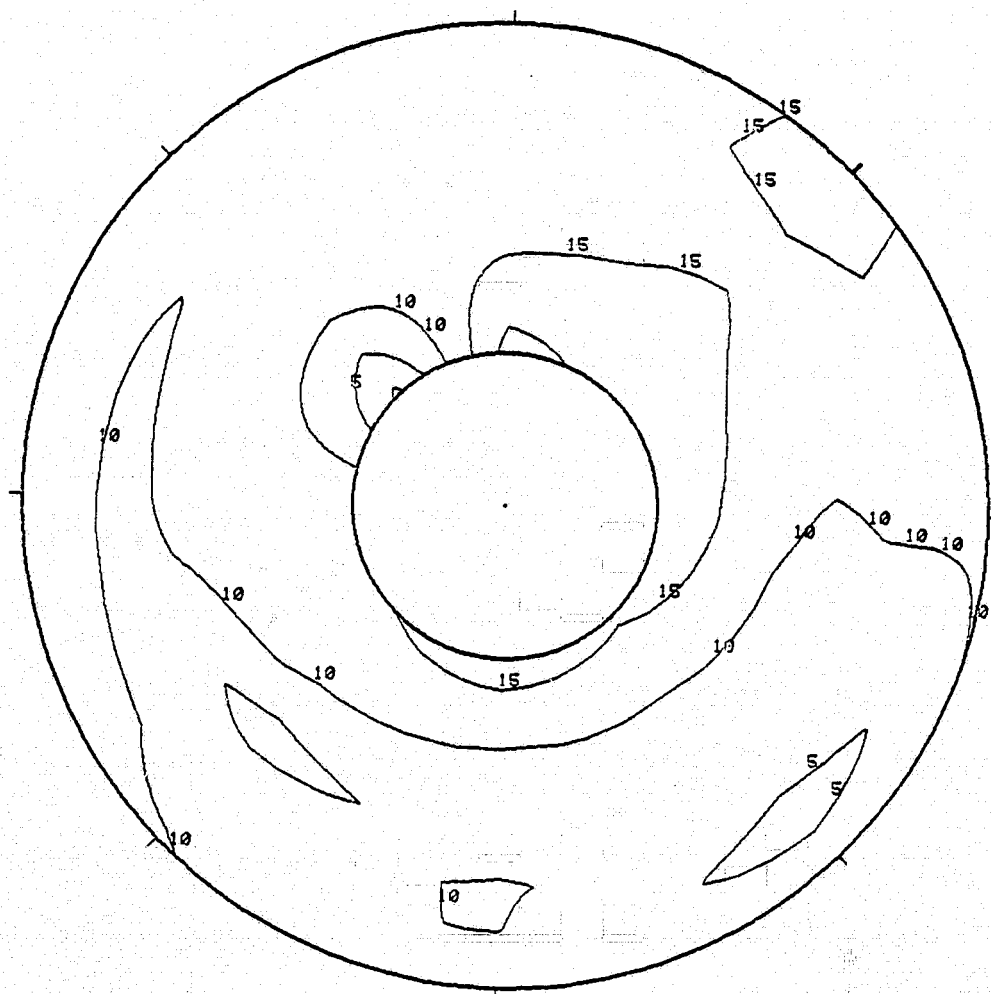
DELTA3
25.0

BYPASS
0.07742 (120.0)

WAT2
61.7%

CIVV
-25.0

62(m) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01107

FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 61.7 %

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. 62
THE SEGMENT START TIME WAS AT 1:32:36.091

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

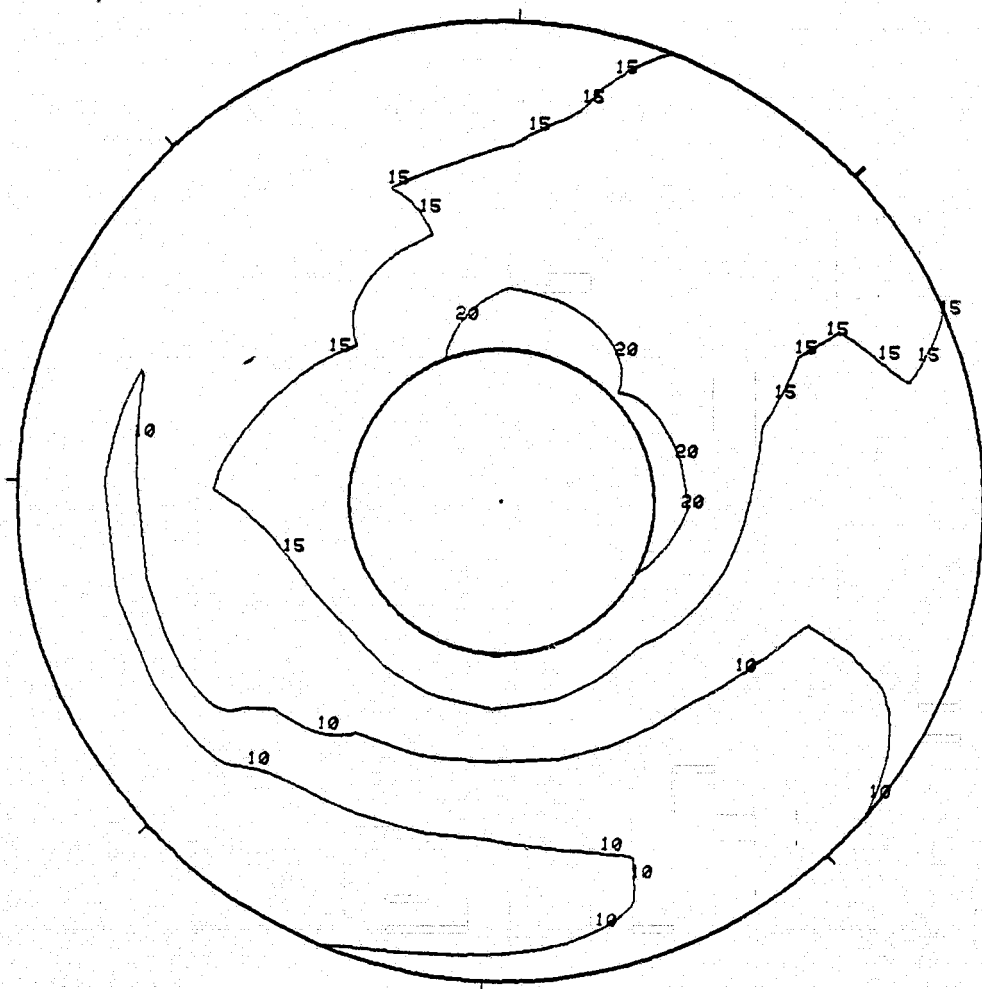
DELTA3
25.0

BYPASS
0.07742 (120.0)

WAT2
61.7%

CIVV
-25.0

62(n) Turbulence Contour 500 Hz



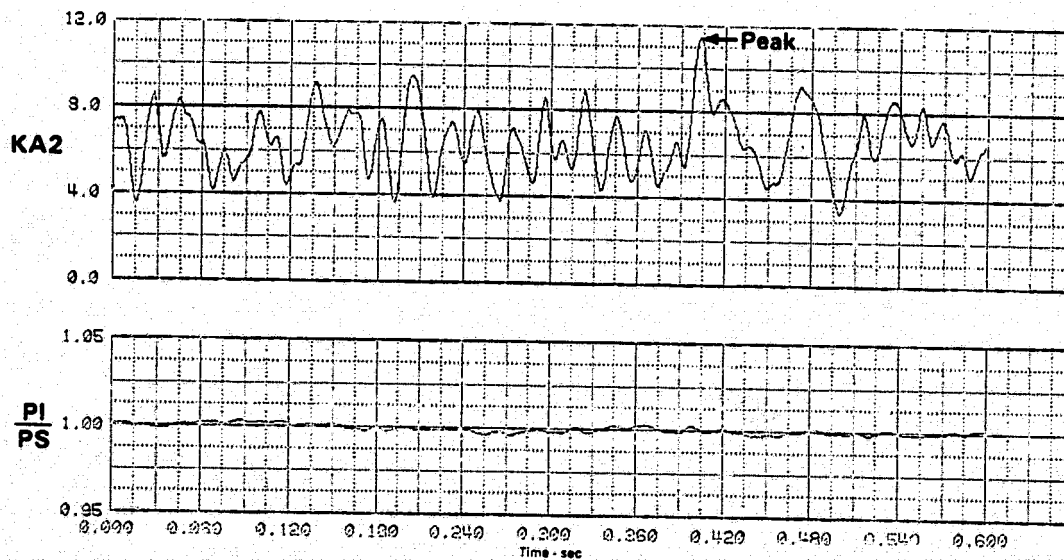
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01331
FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 61.7\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. 62
THE SEGMENT START TIME WAS AT 1:32:36.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 61.7%	CIVV -25.0
PI 44.45 (6.447)	PI/PS 1.001	KTHETA 0.270	KRA2 0.432	EKRA2 11.161	KR2 11.431	KC2 0.260	KC3P 0.237
							D2 0.073

62(o) Time History Plots 45 Hz



PEAK AT TIME = 0.403586 SECONDS

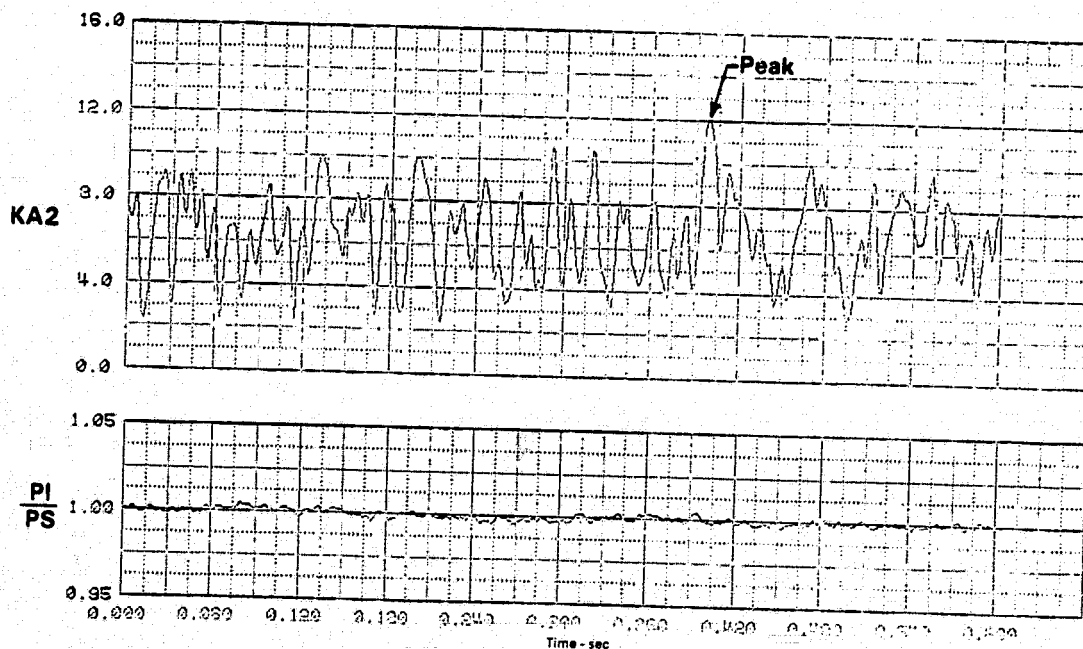
FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2, \alpha = -2.0, \beta = 0.0, WAT2 = 61.7\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. 62
THE SEGMENT START TIME WAS AT 1:32:33.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BVPS33 0.07742 (120.0)	WAT2 61.7%	CIVV -25.0
PI 44.44 (6.445)	PI/PS 1.000	KTHETA 0.230	KRA2 0.457	BKRA2 11.817	KA2 12.046	KC2 0.165	KOSP 0.192
							D2 0.076

62(p) Time History Plots
100 Hz



PEAK AT TIME = 0.398176 SECONDS

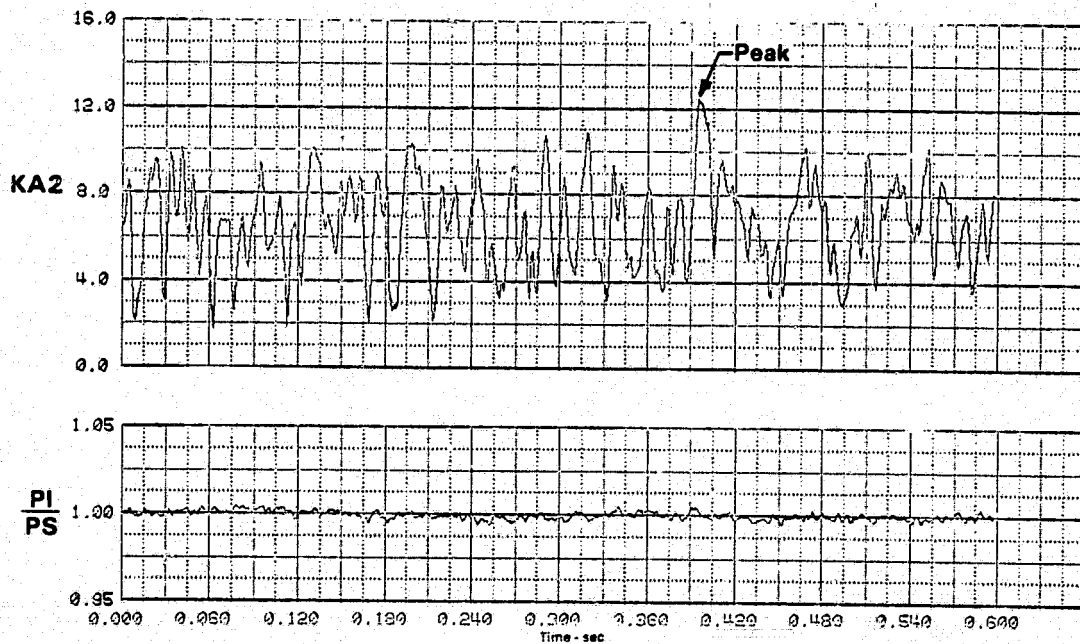
FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 61.7\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. 62
THE SEGMENT START TIME WAS AT 1:32:26.092

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 61.7%	CIVV -25.0
PI 44.58 (6.466)	PI/PS 1.004	KTHETA 0.249	KRA2 0.471	SKRA2 12.174	KA2 12.423	KC2 0.214	KOSP 0.199
							O2 0.087

62(q) Time History Plots 170 Hz



PEAK AT TIME = 0.394930 SECONDS

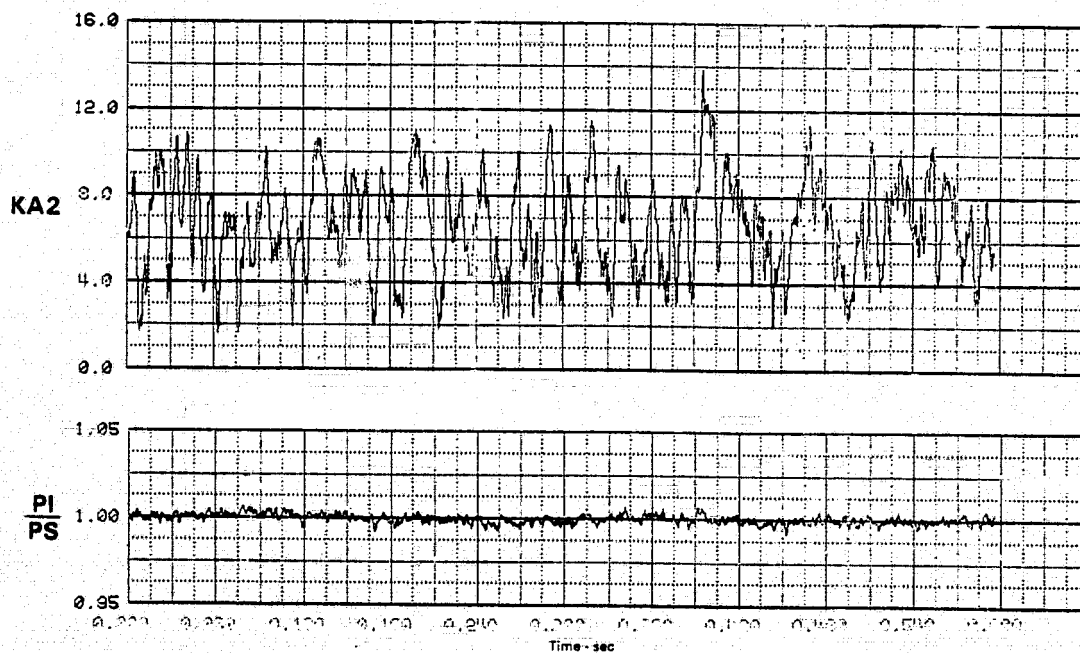
FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_c = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 61.7 %

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. 62
THE SEGMENT START TIME WAS AT 1:32:36.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 61.7%	CIVV -25.0
PI 44.60 (6.469)	PI/PS 1.004	KTHETA 0.267	KRA2 0.525	BKRA2 13.574	KQ2 13.841	KQ2 0.224	KQSP 0.205
							D2 0.091

62(r) Time History Plots 500 Hz



PEAK AT TIME = 0.395660 SECONDS

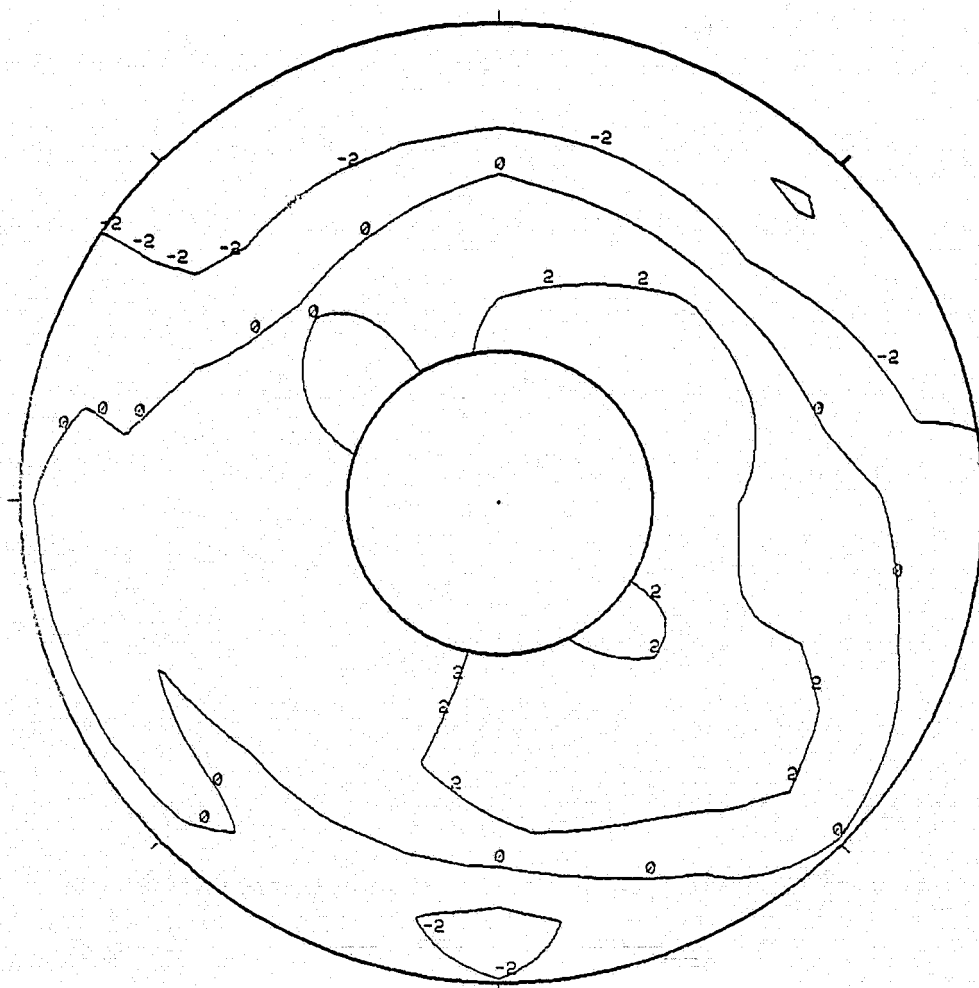
FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 61.7\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. 02
THE SEGMENT START TIME WAS AT 1:32:36.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 61.7%	CIVV -25.0
P1 44.45 (6.447)	PI/PS 1.001	KTHETA 0.270	KRA2 0.432	BKRA2 11.161	KA2 11.431	KC2 0.260	KOSP 0.237
							D2 0.073

**62(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz**



MEAN FACE PRESSURE = 44.45 kPa (6.447 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.403586 SECONDS

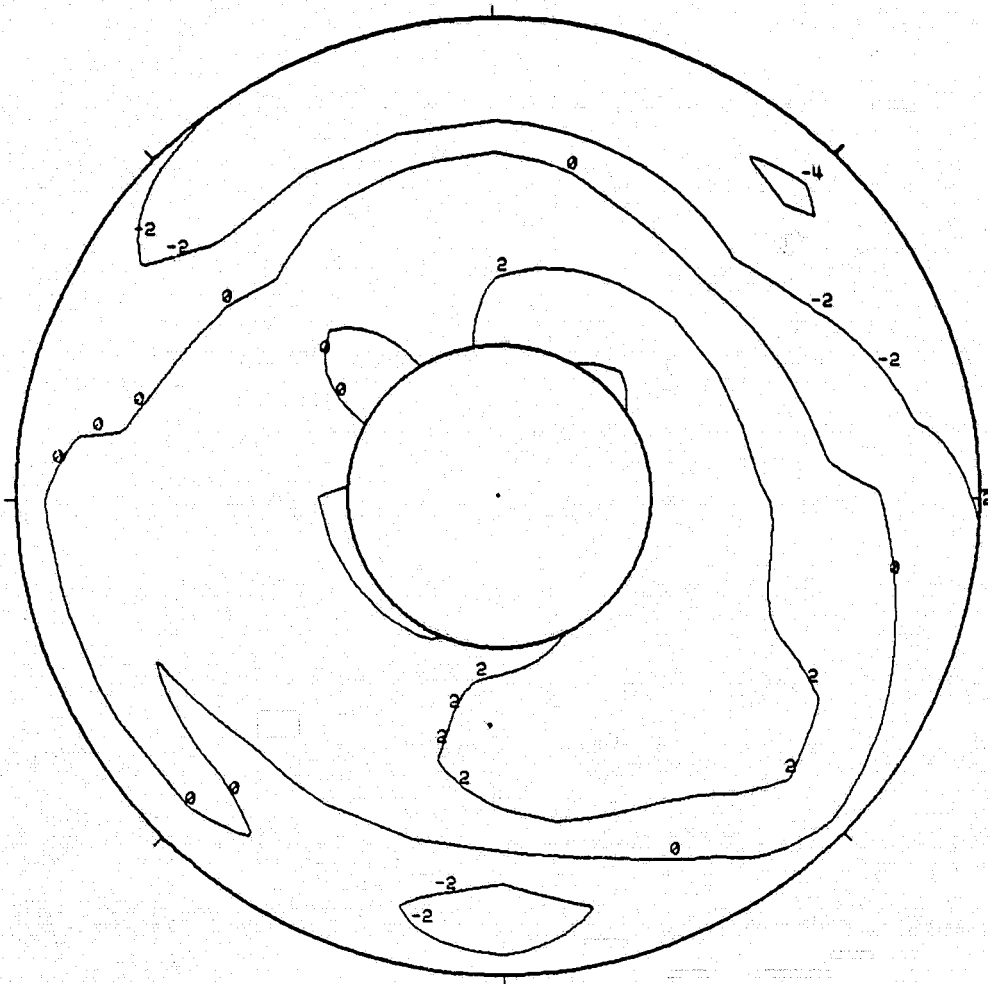
**FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 61.7\%$**

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. 62
THE SEGMENT START TIME WAS AT 1:32:36.091

MACH 2.2	ALPHA -2	BETA 0	RHO 1.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 61.7%	CIVV -25.0
P1 44.44 (6.445)	P1/PS 1.000	KTHETA 0.230	KRA2 0.457	BKRA2 11.317	KA2 12.046	KC2 0.165	KOSP 0.192
							O2 0.076

62(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz



MEAN FACE PRESSURE = 44.44 kPa (6.445 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.398176 SECONDS

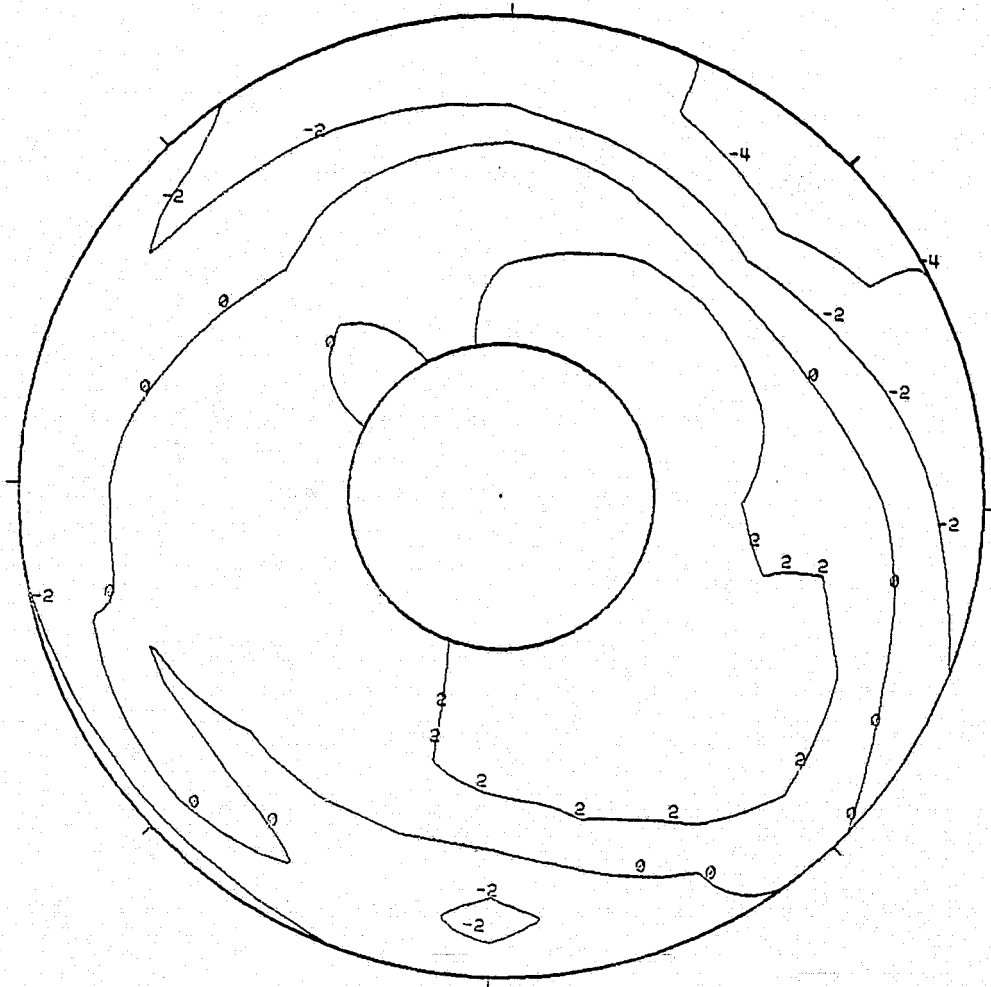
FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 61.7\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. 62
THE SEGMENT START TIME WAS AT 1:32:36.092

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 61.7%	CIVV -25.0
PI 44.58 (6.466)	PI/PS 1.004	KTHETA 0.249	KRA2 0.471	BKRA2 12.174	KA2 12.423	KC2 0.214	KOSP 0.199
							O2 0.087

62(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 44.58 kPa (6.466 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.394930 SECONDS

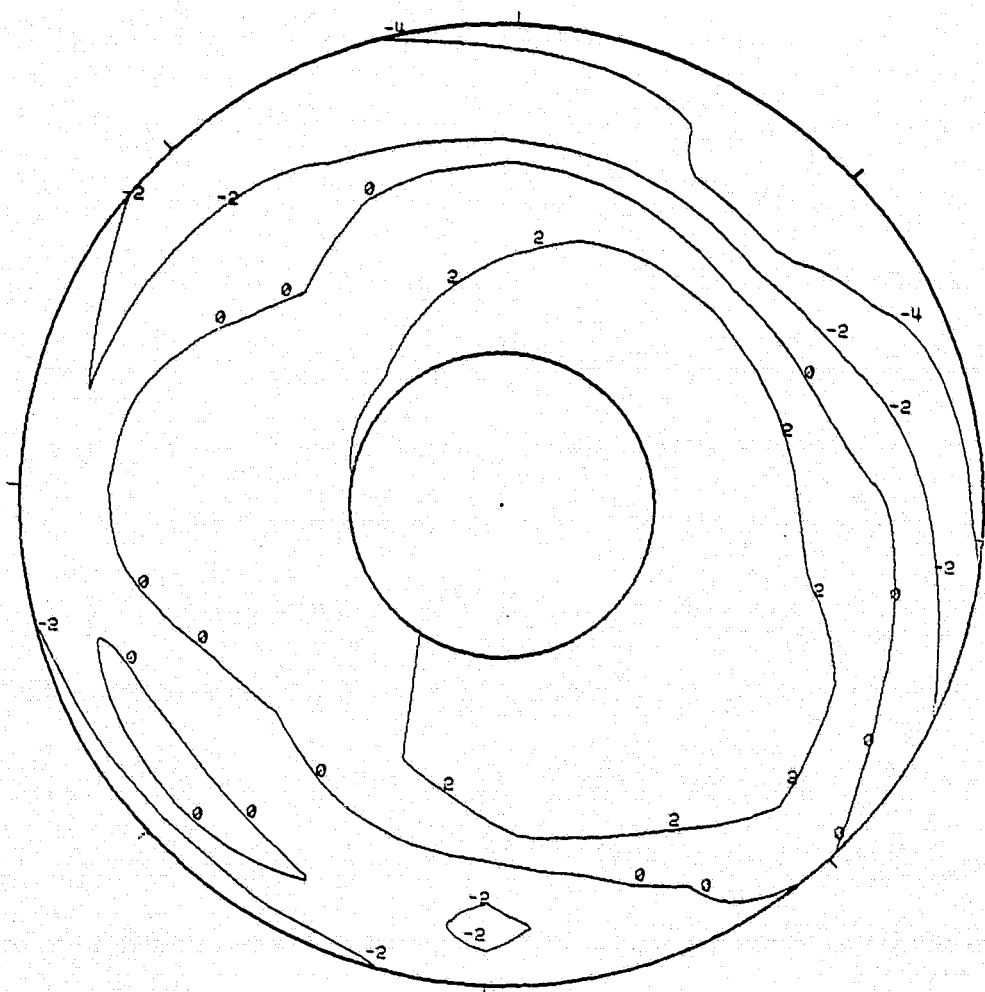
FIGURE G-62 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 61.7 %

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 5 IDENT. 62
THE SEGMENT START TIME WAS AT 1:32:36.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 61.7%	CIVV -25.0
P1 44.60 (6.469)	P1/PS 1.004	KTHETA 0.267	KRA2 0.525	BKRA2 13.574	KA2 13.841	KC2 0.224	KOSP 0.206
							D2 0.091

62(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz



MEAN FACE PRESSURE = 44.60 kPa (6.469 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.395660 SECONDS

FIGURE G-62 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 61.7\%$

FSCP - NASA Data Study
 Part/Point - 385/2, Ident 63
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.1) -25.00

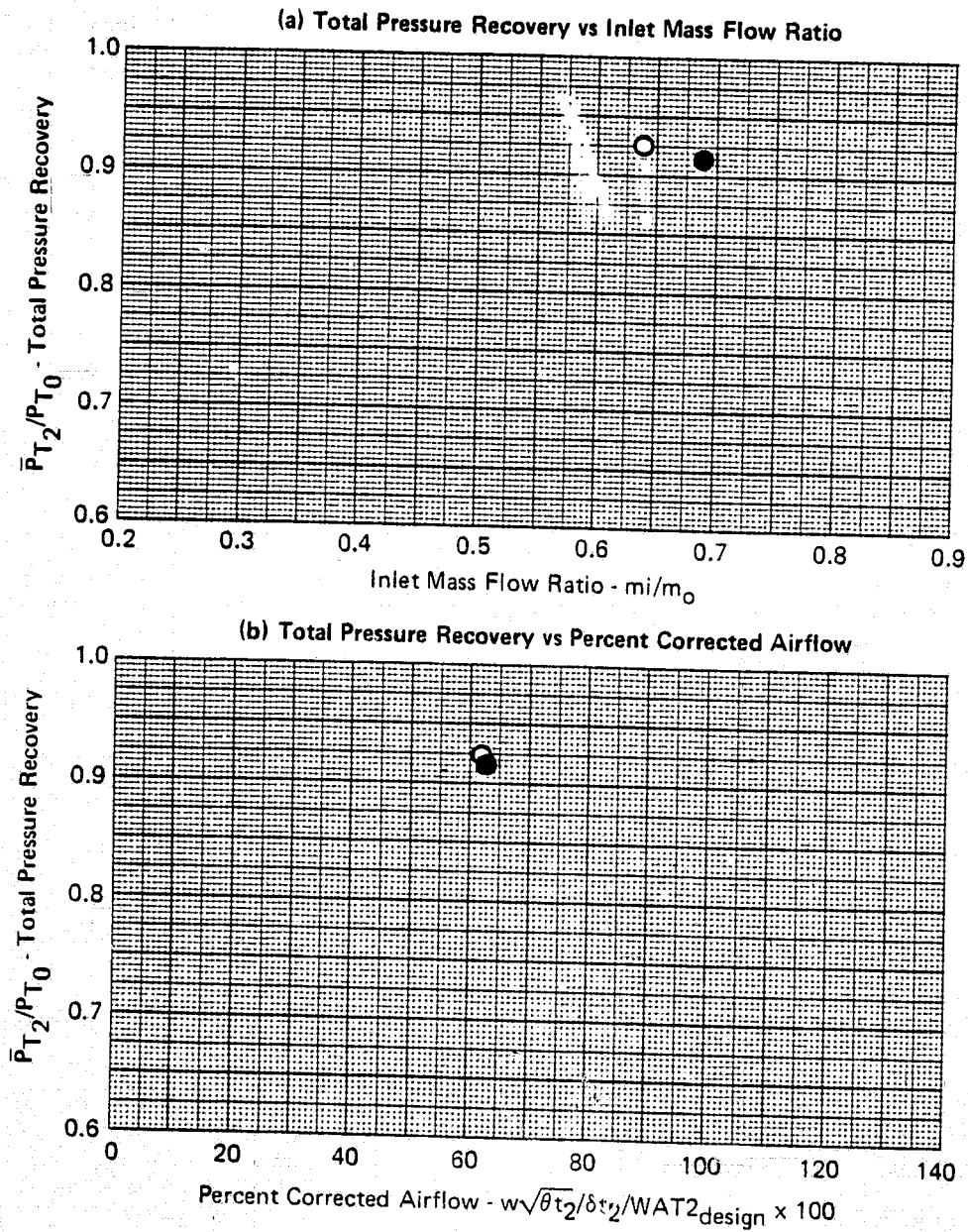
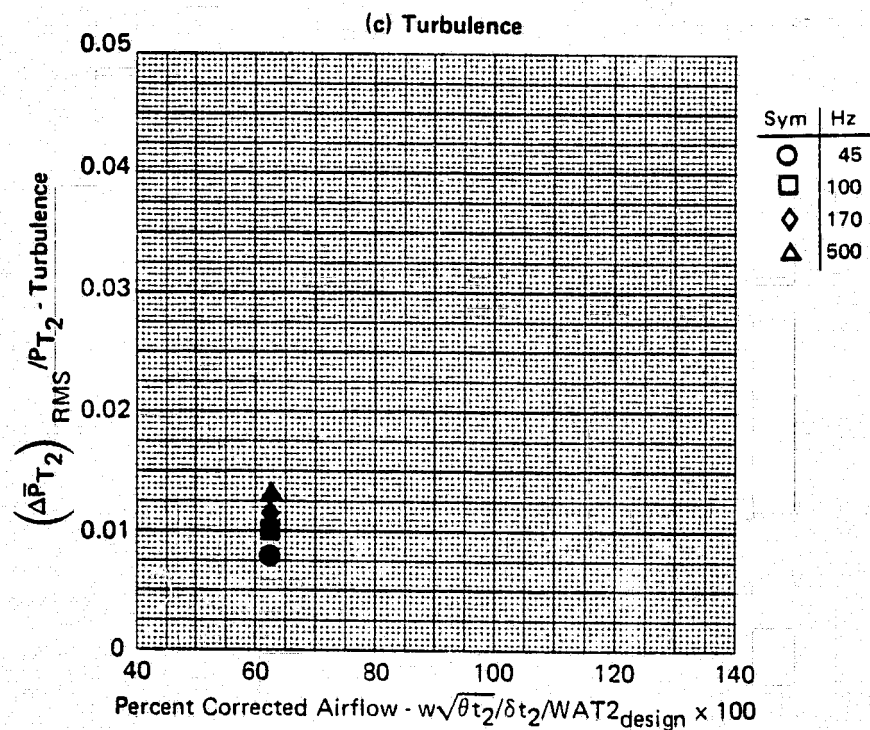


FIGURE G-63
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = -2.0, \beta = 0.0, WAT2 = 62.3 \%$

GP77-0658-1

FSCP - NASA Data Study
 Part/Point - 385/2, Ident 63
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.1) -25.00



GP77-0658-5

FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 62.3\%$

FSCP - NASA Data Study
 Part/Point - 385/2, Ident 63
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.77(120.1) -25.00

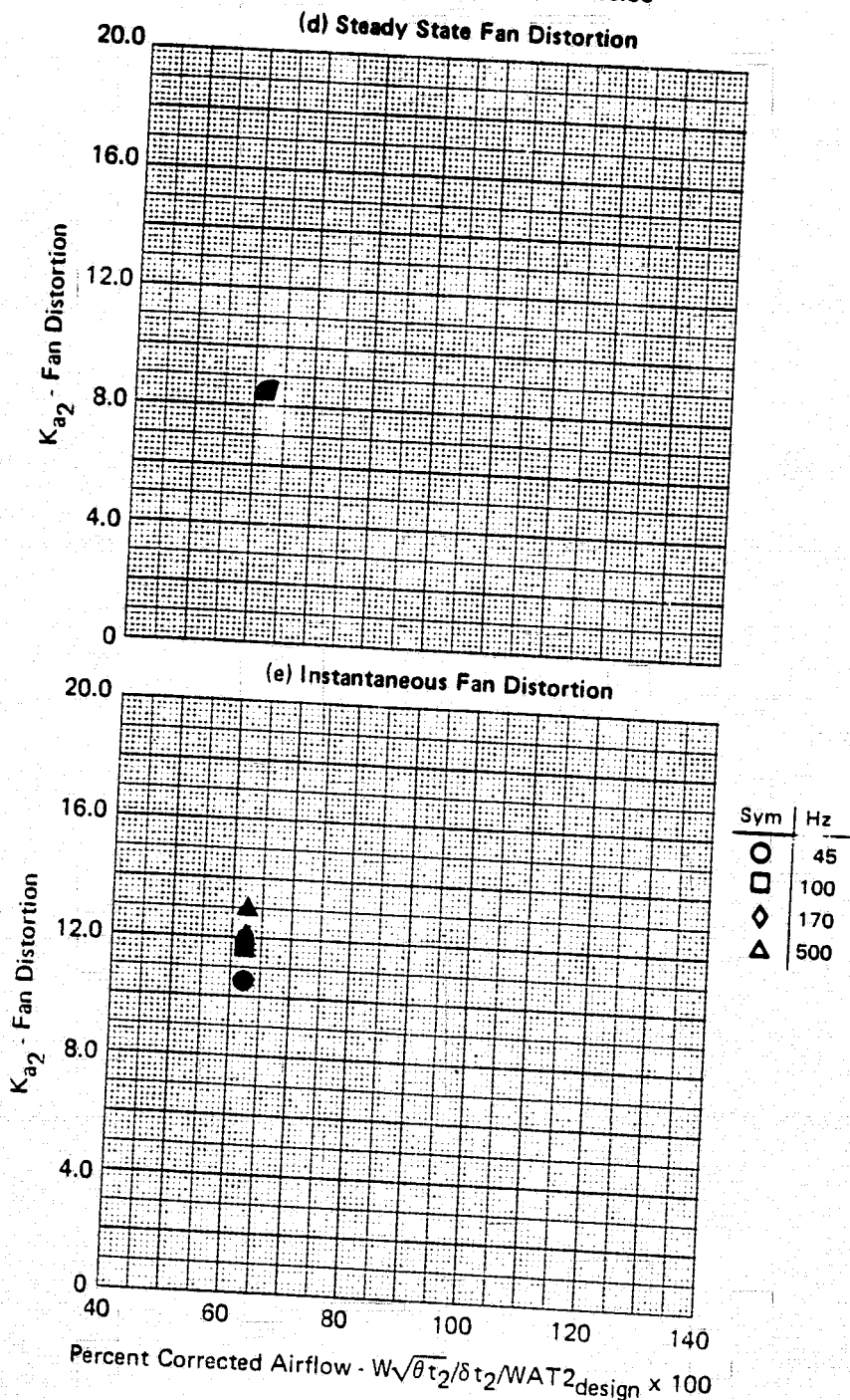


FIGURE G-63 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 62.3\%$

GP77-0658-3

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FSCP - NASA Data Study
 Part/Point - 385/2, Ident 63
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.1) -25.00

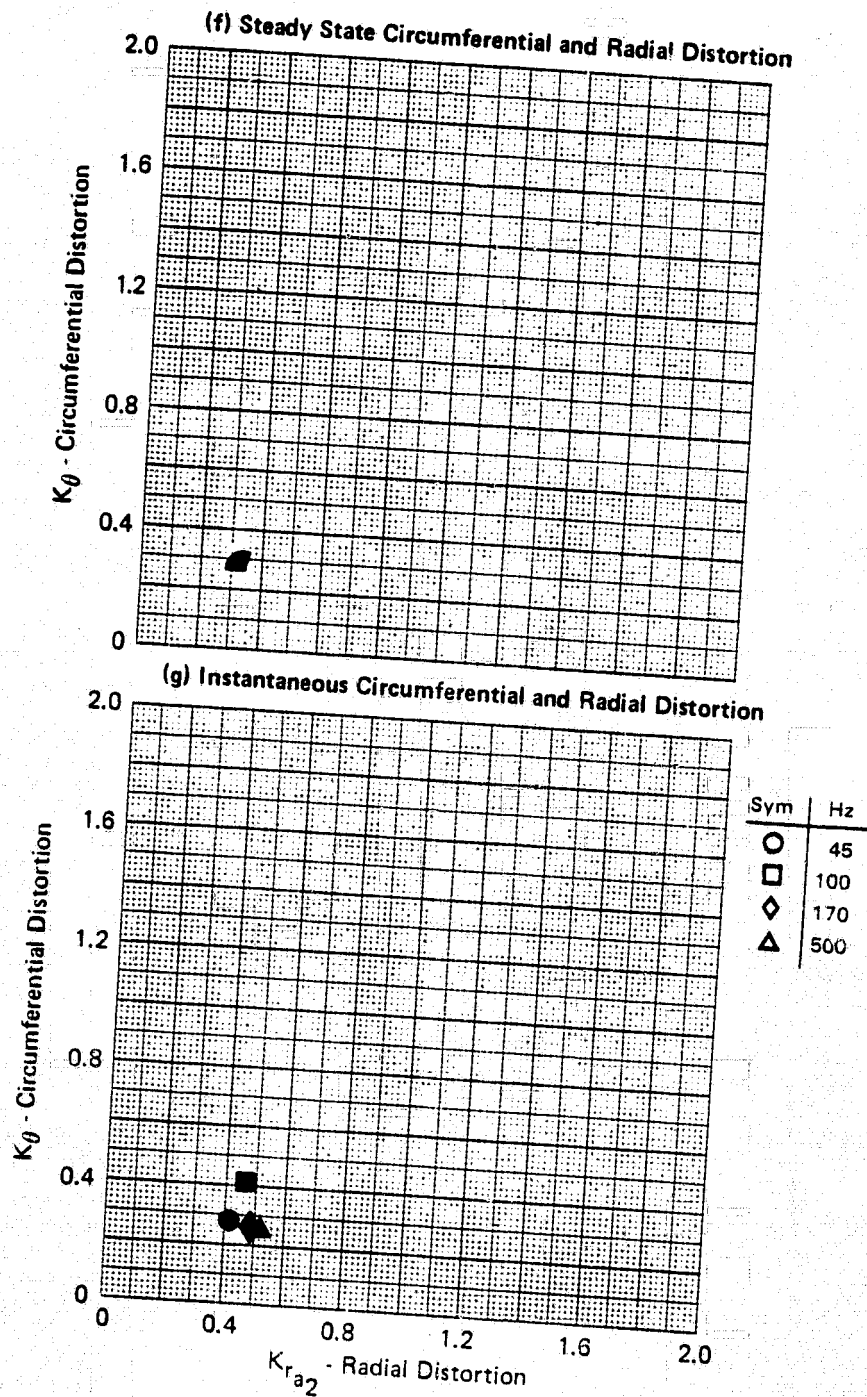
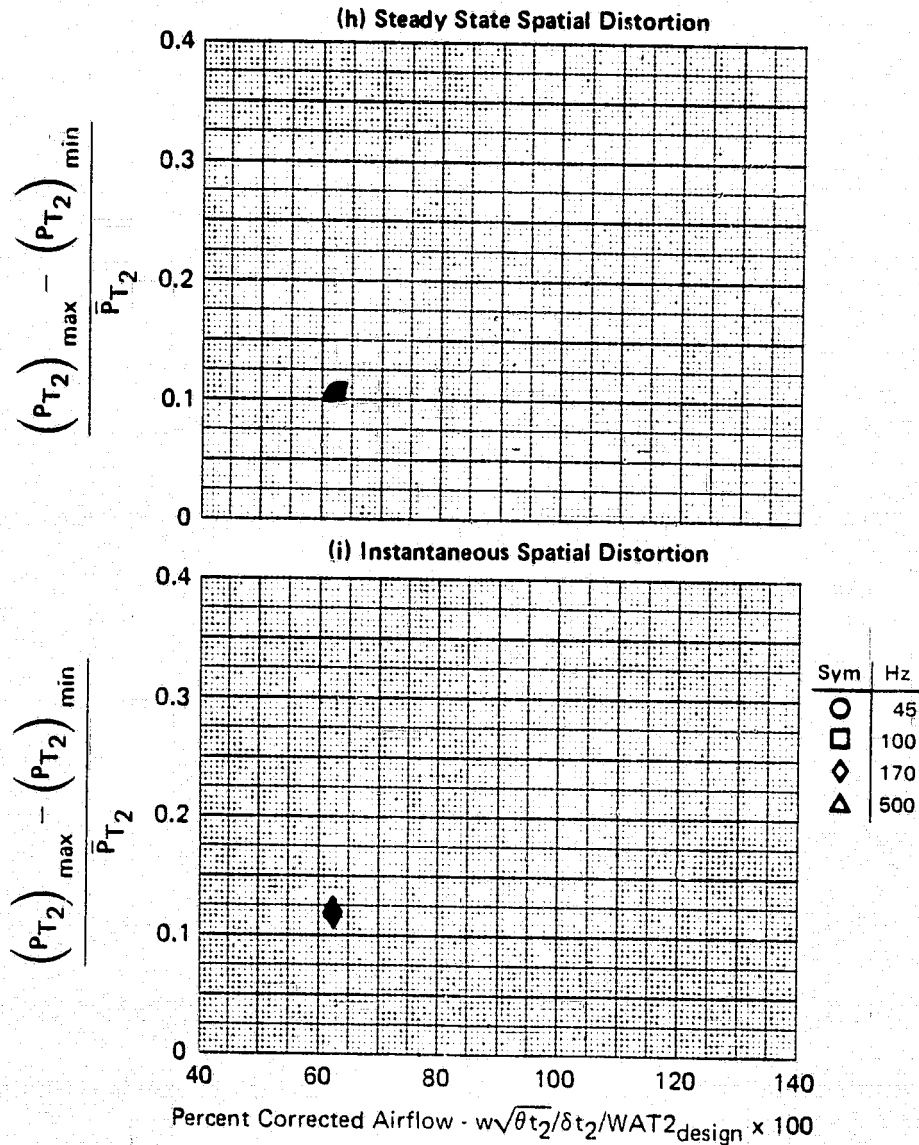


FIGURE G-63 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 62.3\%$

GP77-0658-2

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FSCP - NASA Data Study
 Part/Point - 385/2, Ident 63
 RHO DELTA3 BYPASS CIVV
 -4.0 25.0 0.077(120.1) -25.00



GP77-0658-4

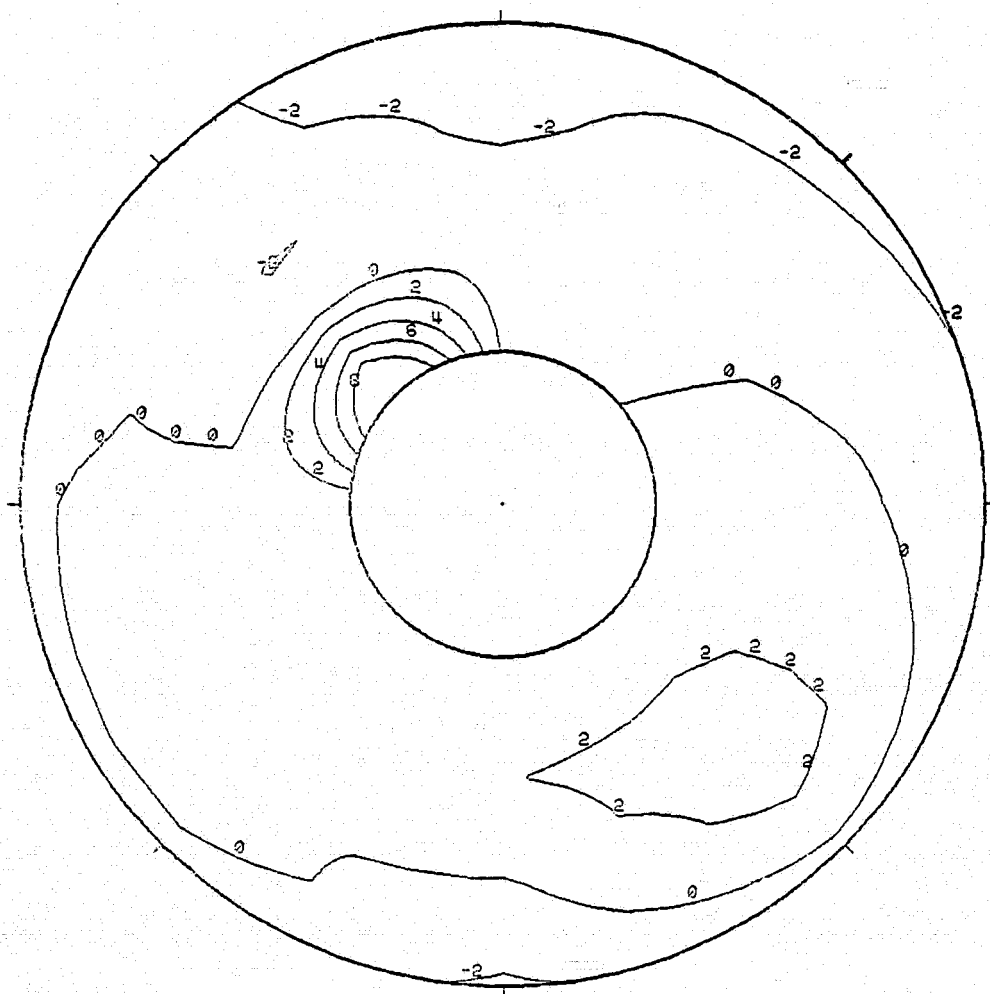
FIGURE G-63 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 62.3\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 335 / 2 IDENT. 63
THE SEGMENT START TIME WAS AT 1:29:15.085

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07748 (120.1)	WAT2 62.3%	CIVV -25.0
PI 44.00 (6.381)	PI/PS 1.000	KTHETA 0.291	KRA2 0.233	BKRA2 3.146	KR2 9.437	KC2 0.354	K8SP 0.317
							O2 0.103

63 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 44.00 kPa (6.381 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

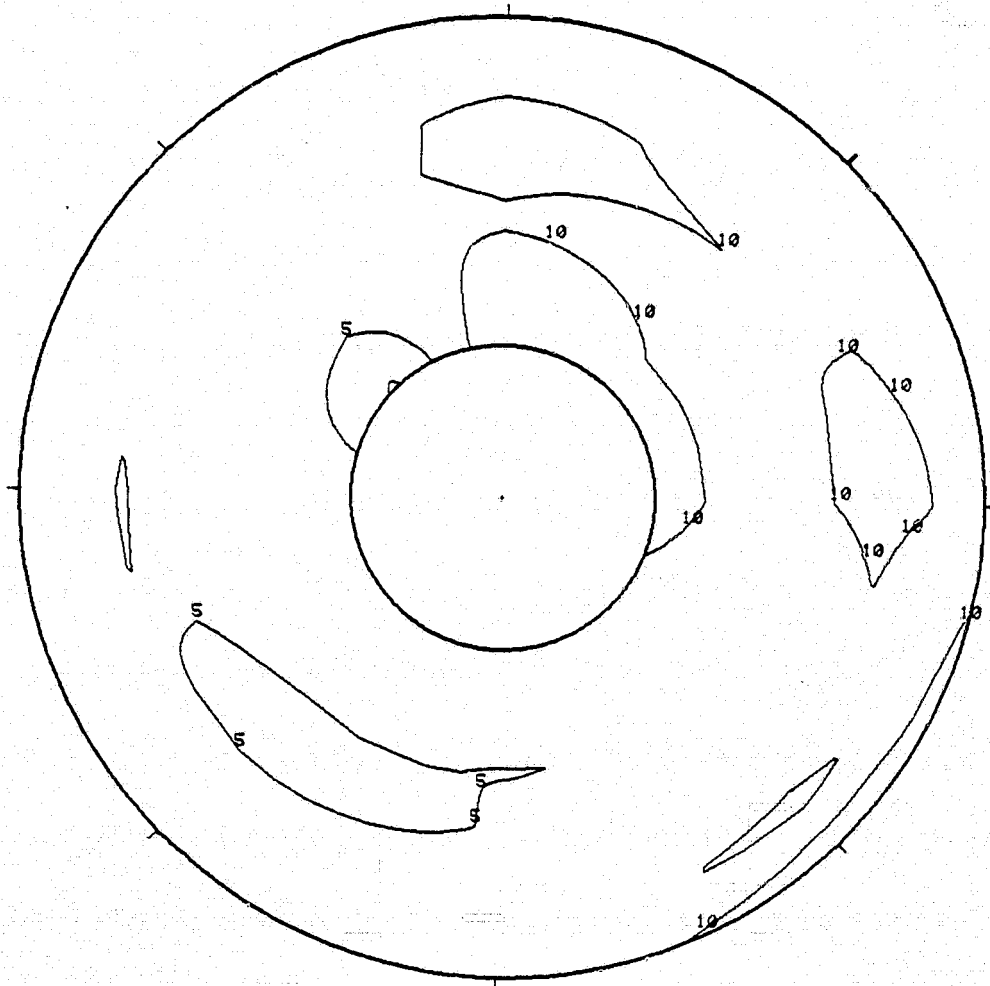
FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 62.3 %

FSCP - NASA DATA STUDY

DATA PART/POINT 305 / 2 IDENT. 63
THE SEGMENT START TIME WAS AT 1:29:15.090

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07748 (120.1)	WAT2 62.3%	CIVV -25.0
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63 (k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01012

FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 62.3 %

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 2 IDENT. 63
THE SEGMENT START TIME WAS AT 1:29:15.088

MOCH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

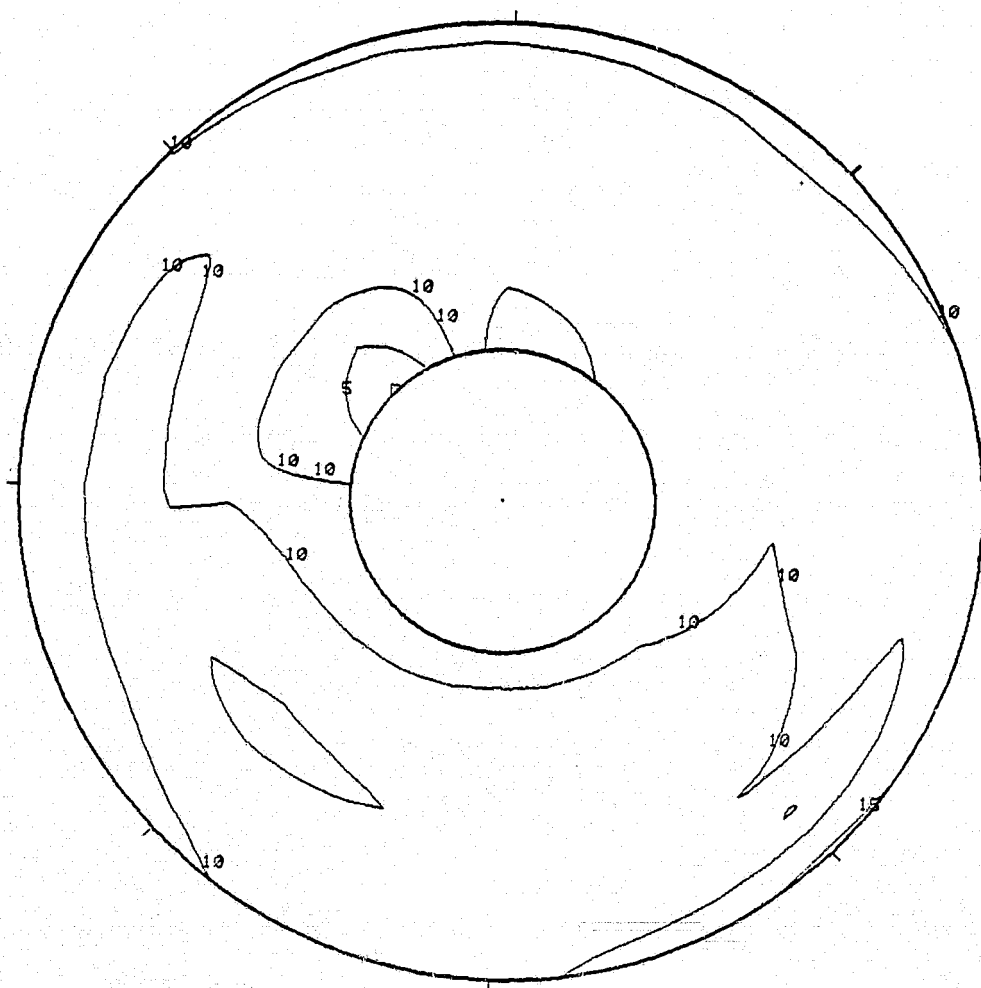
DELTA3
25.0

BYPASS
0.07748 (120.1)

WAT2
62.3%

C1VV
-25.0

63 (I) Turbulence Contour 100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00790

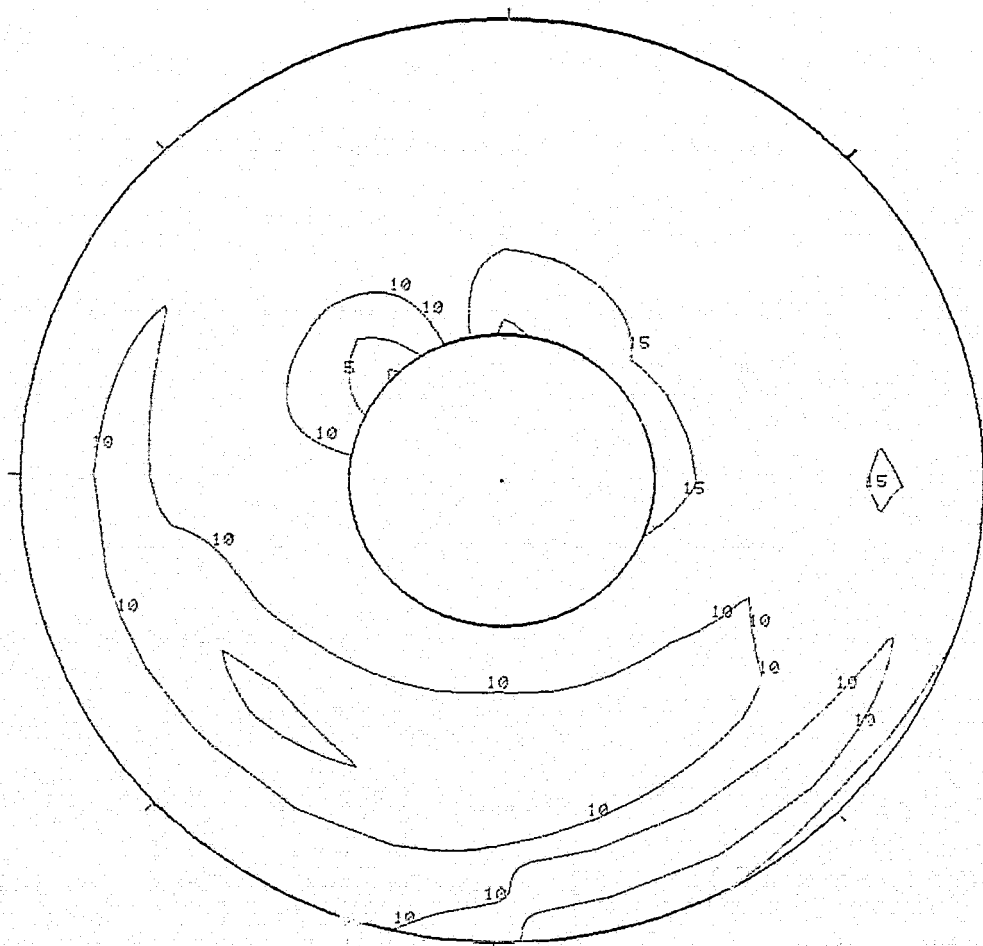
FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 62.3\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 2 IDENT. **63**
THE SEGMENT START TIME WAS AT 1:29:15.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.9	BYPASS 0.07748 (120.1)	WAT2 62.3%	CIVV -25.0
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63 (m) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01138

FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 62.3\%$

0.9

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DATA PART/POINT 385 / 2 IDENT. 63
THE SEGMENT START TIME WAS AT 1:29:15.085

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

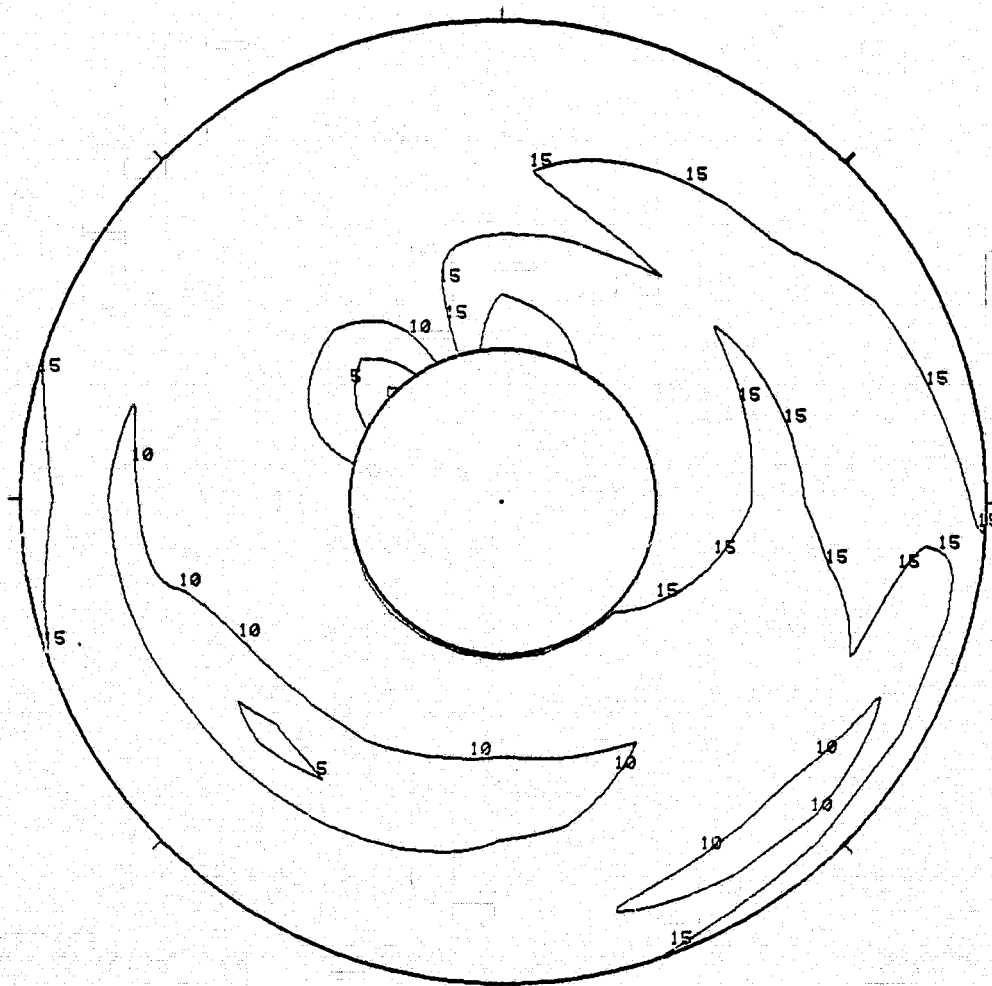
DELTA3
25.0

BYPASS
0.07748 (120.1)

WAT2
62.3%

CLVV
-25.0

63 (n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01310

FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 62.3 %

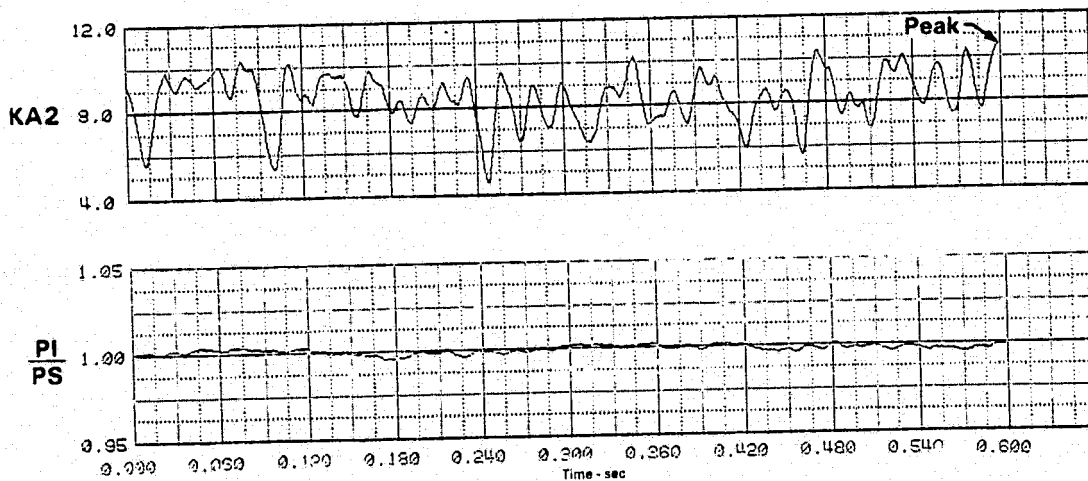
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FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 2 IDENT. 63
THE SEGMENT START TIME WAS AT 1:29:15.000

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07748 (120.1)	WAT2 62.3%	CIVV -25.0
P1 43.95 (6.374)	PI/PS 0.999	KTHETA 0.279	KRA2 0.420	BKRA2 10.259	KA2 10.537	KC2 0.176	KOSP 0.220
							D2 0.120

63(o) Time History Plots
45 Hz



PEAK AT TIME = 0.598346 SECONDS

FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 62.3\%$

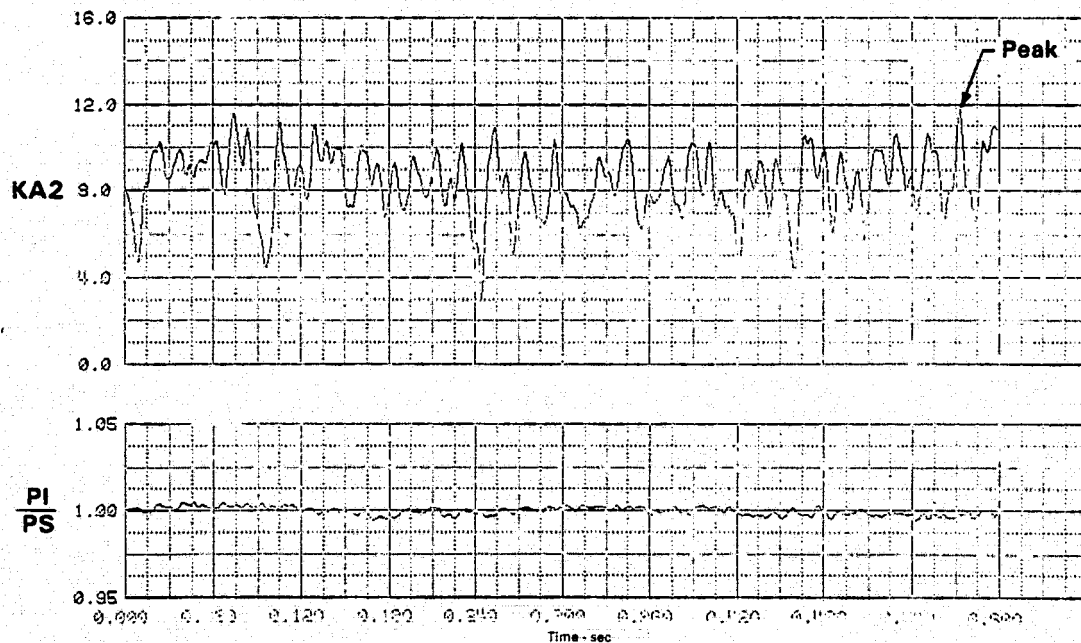
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FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 2 IDENT. 63
THE SEGMENT START TIME WAS AT 1:29:15.083

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYF338 0.07748 (120.1)	WAT2 62.3%	CIVV -25.0
PI 43.90 (6.367)	PI/PS 0.938	KTHETA 0.408	KRA2 0.465	EKRA2 11.374	KA2 11.782	KC2 0.358	KQ3P 0.365
							D2 0.122

63(p) Time History Plots 100 Hz



PEAK AT TIME = 0.573460 SECONDS

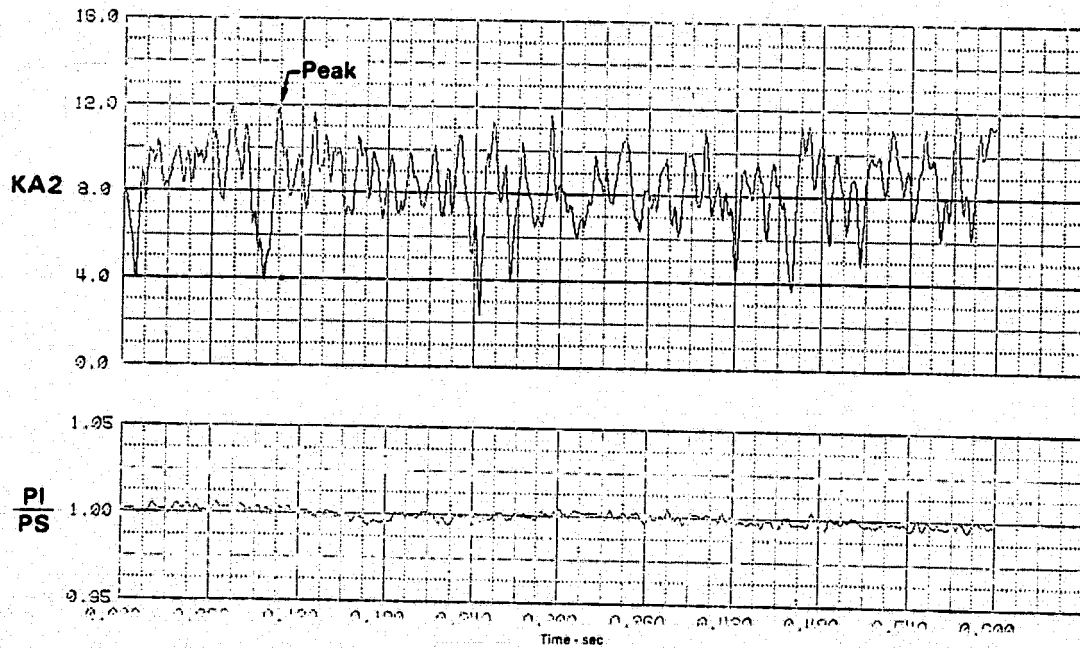
FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 62.3%

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 2 IDENT. 63
THE SEGMENT START TIME WAS AT 1:29:15.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07748 (120.1)	WAT2 62.3%	CIVV -25.0
P1 44.02 (6.384)	PI/PS 1.000	KTHETA 0.261	KRA2 0.478	BKRA2 11.893	KA2 11.954	KC2 0.255	KOSP 0.253
							D2 0.118

63(q) Time History Plots 170 Hz



PEAK AT TIME = 0.103872 SECONDS

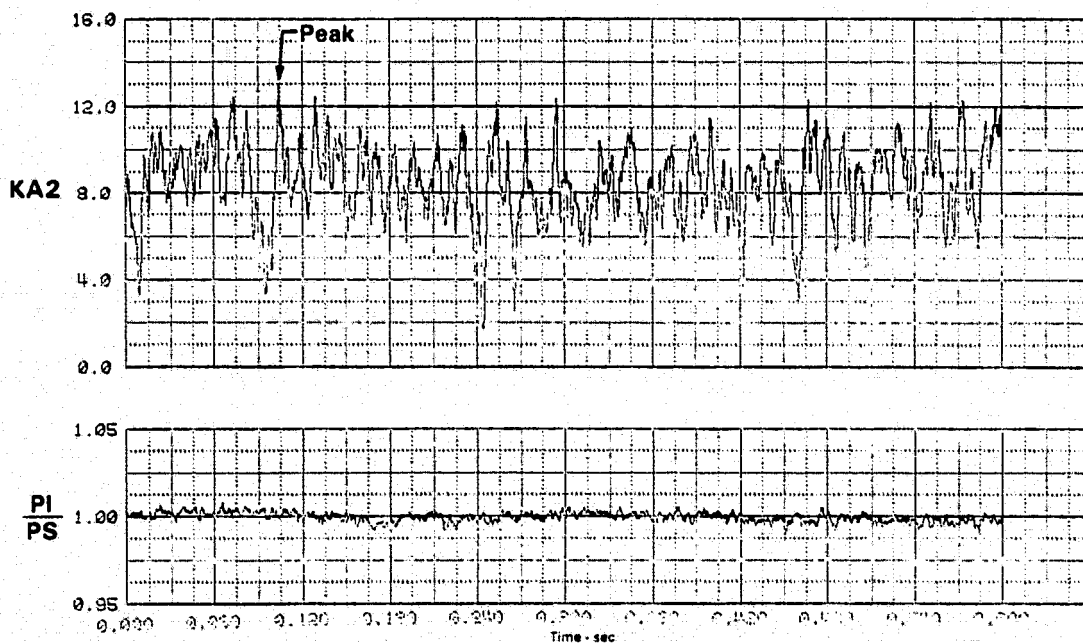
FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2, \alpha = -2.0, \beta = 0.0, WAT2 = 62.3\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 2 IDENT. 63
THE SEGMENT START TIME WAS AT 1:29:15.085

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07748 (120.1)	WAT2 62.3%	CIVV -25.0
PI 43.97 (6.377)	P1/PS 0.999	KTHETA 0.262	KRA2 0.520	BKRA2 12.716	KA2 12.978	KC2 0.244	KOSP 0.249
							D2 0.121

63(r) Time History Plots 500 Hz



PEAK AT TIME = 0.104064 SECONDS

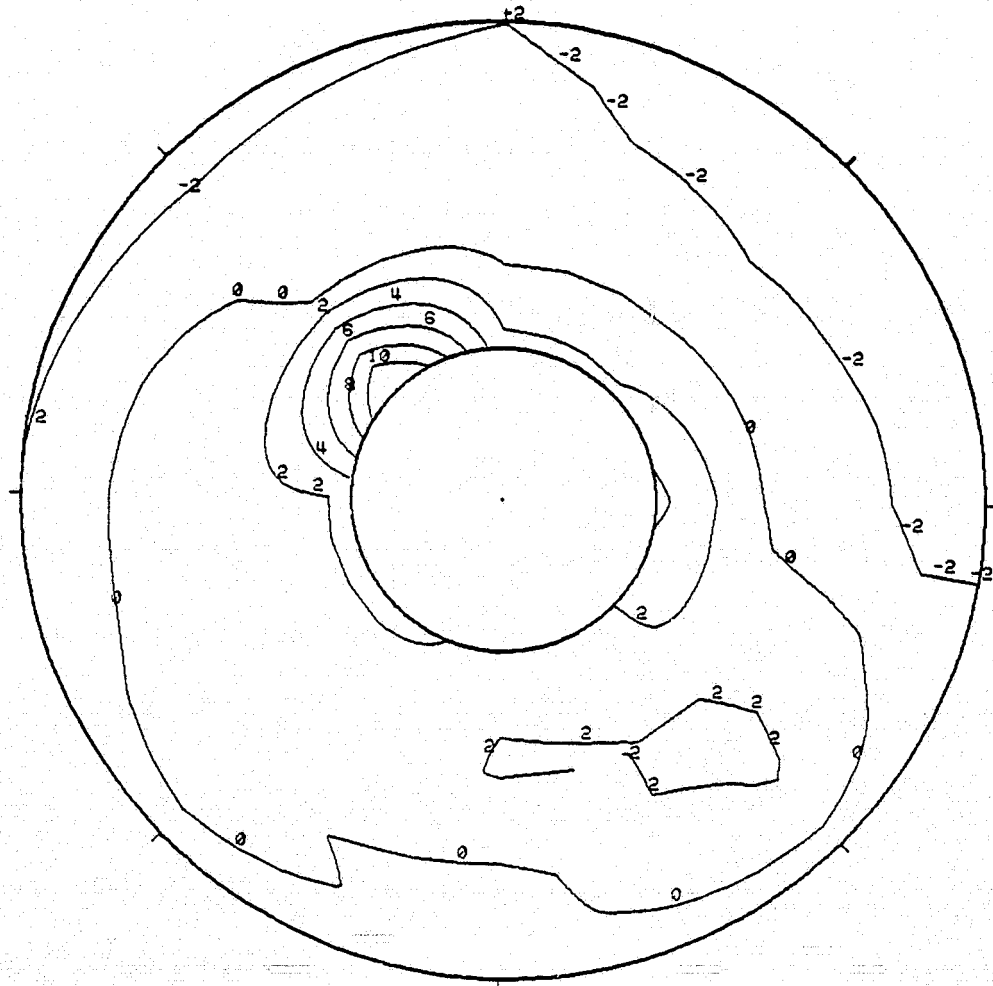
FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 62.3\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 2 IDENT. 63
THE SEGMENT START TIME WAS AT 1:29:15.090

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07748 (120.1)	WAT2 62.3%	CIVV -25.0
PI 43.95 (6.374)	PI/PS 0.999	KTHETA 0.279	KRA2 0.420	BKRA2 10.253	KA2 10.537	KC2 0.176	KOSP 0.280
							D2 0.120

**63 (a) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz**



MEAN FACE PRESSURE = 43.95 kPa (6.374 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.598346 SECONDS

FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 62.3\%$

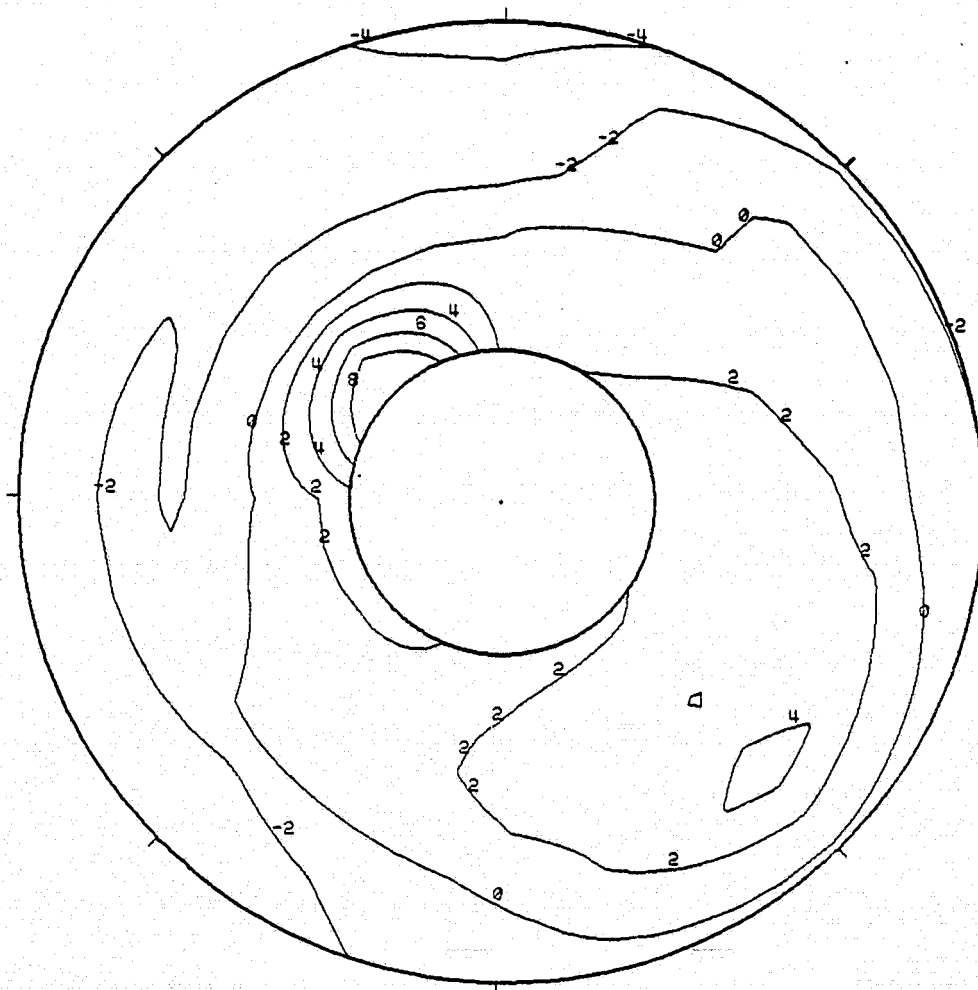
FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 2 IDENT. 63
THE SEGMENT START TIME WAS AT 1:29:15.088

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
2.2	-2	0	-4.0	25.0	0.07748 (120.1)	62.3%	-25.0

P1	P1/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
43.90 (6.367)	0.998	0.408	0.465	11.374	11.782	0.358	0.365	0.122

63(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz



MEAN FACE PRESSURE = 43.90 kPa (6.367 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.573460 SECONDS

FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 62.3\%$

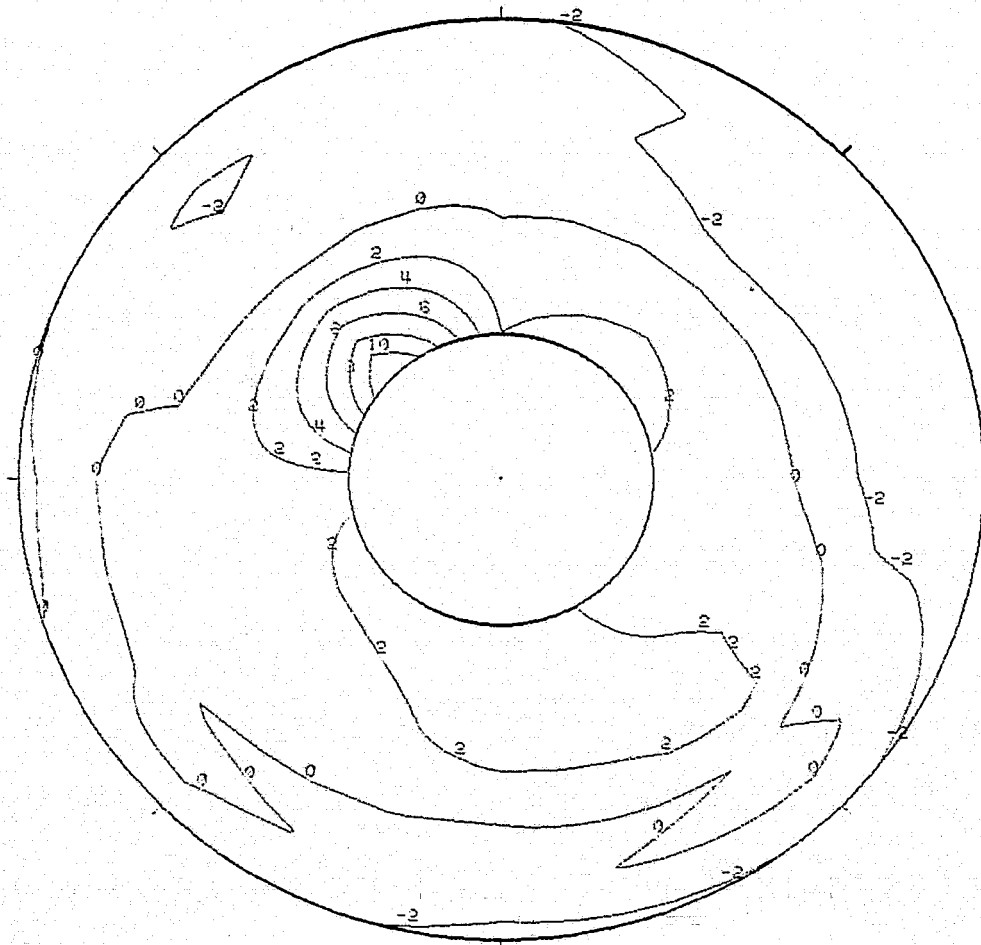
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FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 2 IDENT. **63**
THE SEGMENT START TIME WAS AT 1:29:15.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07748 (120.1)	WAT2 62.3%	CIVV -25.0
P1 44.02 (6.384)	PI/PS 1.000	KTHETA 0.261	KRA2 0.473	BKRA2 11.633	KA2 11.954	KC2 0.255	KOSP 0.253
							D2 0.119

**63(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz**



MEAN FACE PRESSURE = 44.02 kPa (6.384 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.103872 SECONDS

FIGURE G-63 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 62.3 %

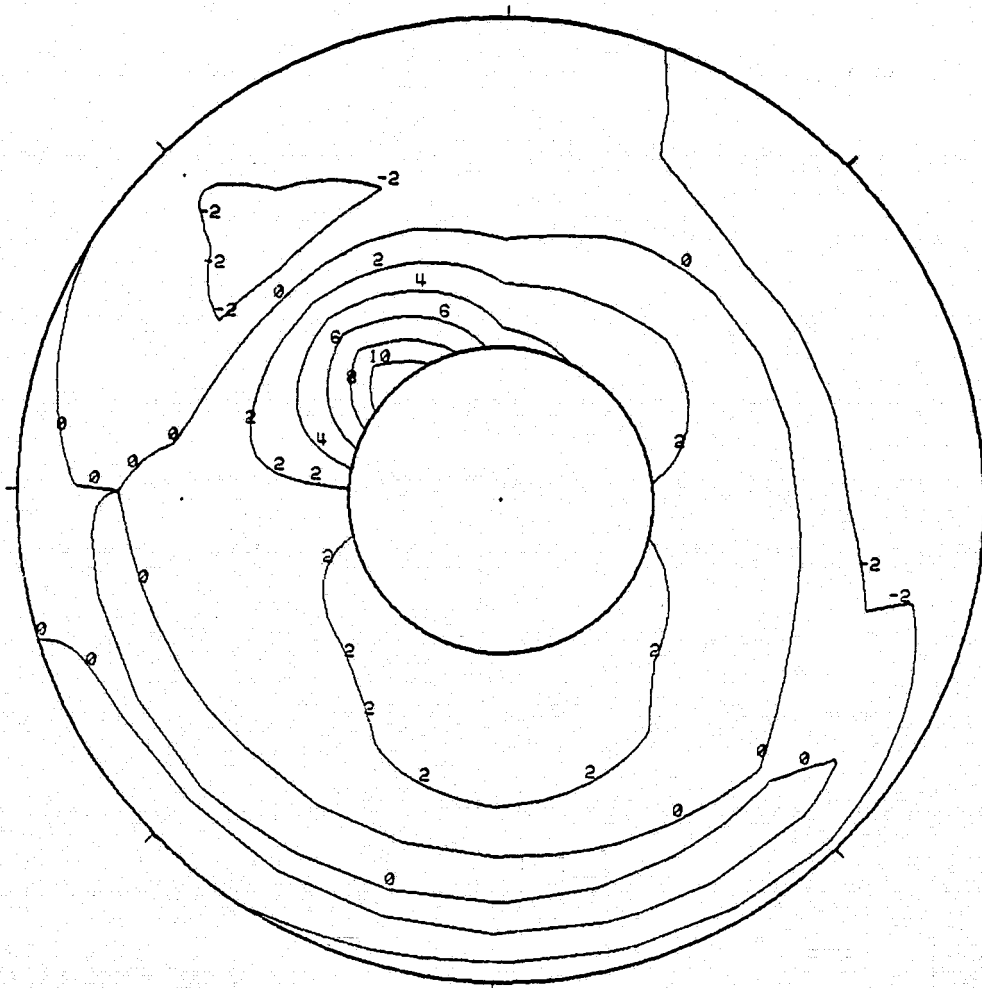
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FSCP - NASA DATA STUDY

DATA PART/POINT 385 / 2 IDENT. 63
THE SEGMENT START TIME WAS AT 1:29:15.085

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07748 (120.1)	WAT2 62.3%	CIVV -25.0
P1 43.97 (6.377)	P1/PS 0.999	KTHETA 0.262	KRA2 0.520	BKRA2 12.716	KA2 12.978	KC2 0.244	KOSP 0.249
							D2 0.121

**63(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz**



MEAN FACE PRESSURE = 43.97 kPa (6.377 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.104064 SECONDS

FIGURE G-63 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 62.3\%$

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FSE - NASA Data Study
 Part/Point - 542/2, Ident 64
 RHO DELTA3 BYPASS CIVV
 -4.0 24.8 0.028(43.1) -25.00

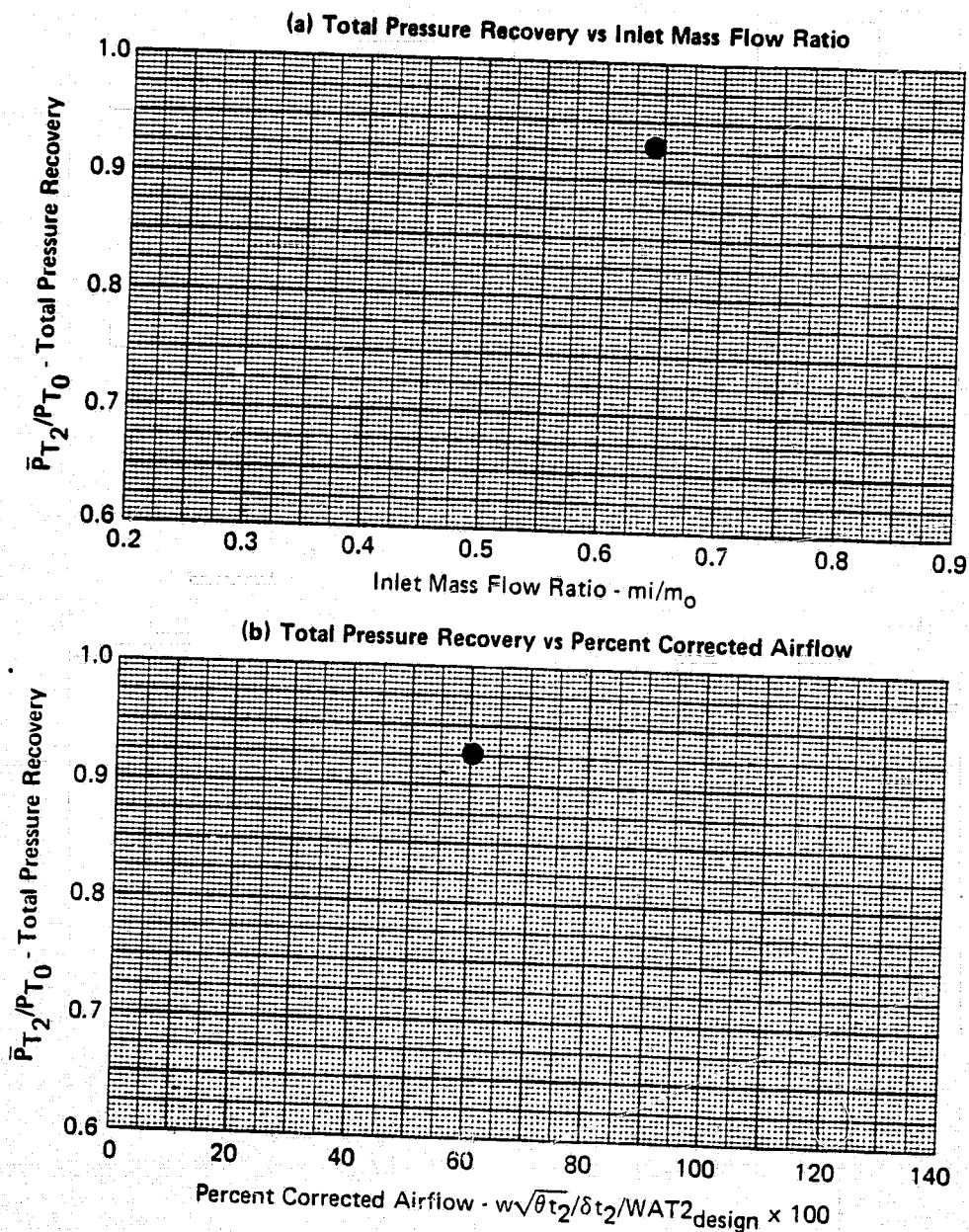
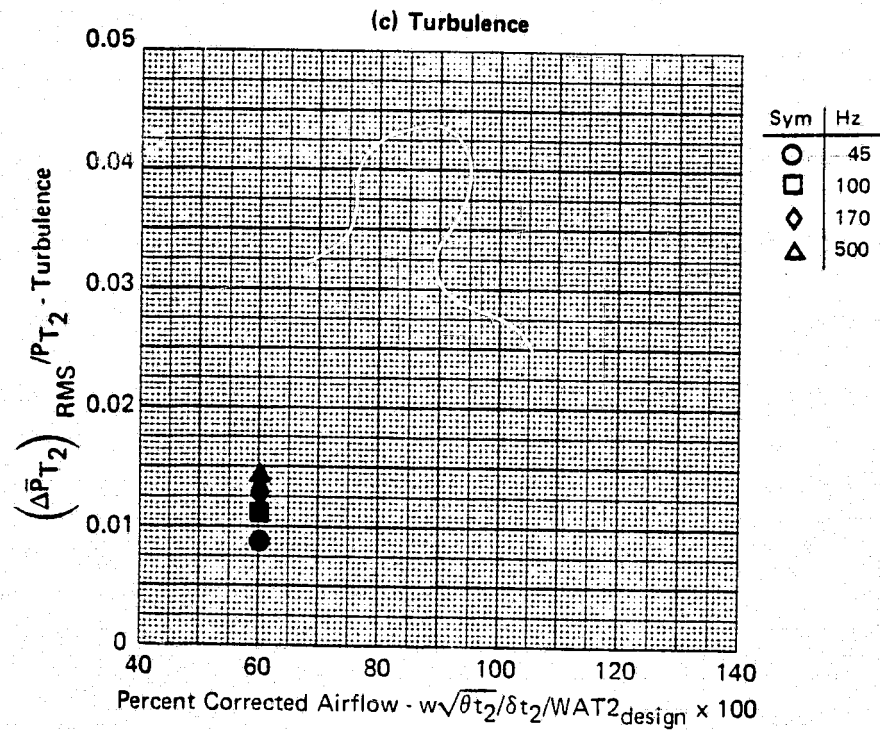


FIGURE G-64
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = -2.0, \beta = 0.0, WAT2 = 60.2 \%$

GP77-0658-1

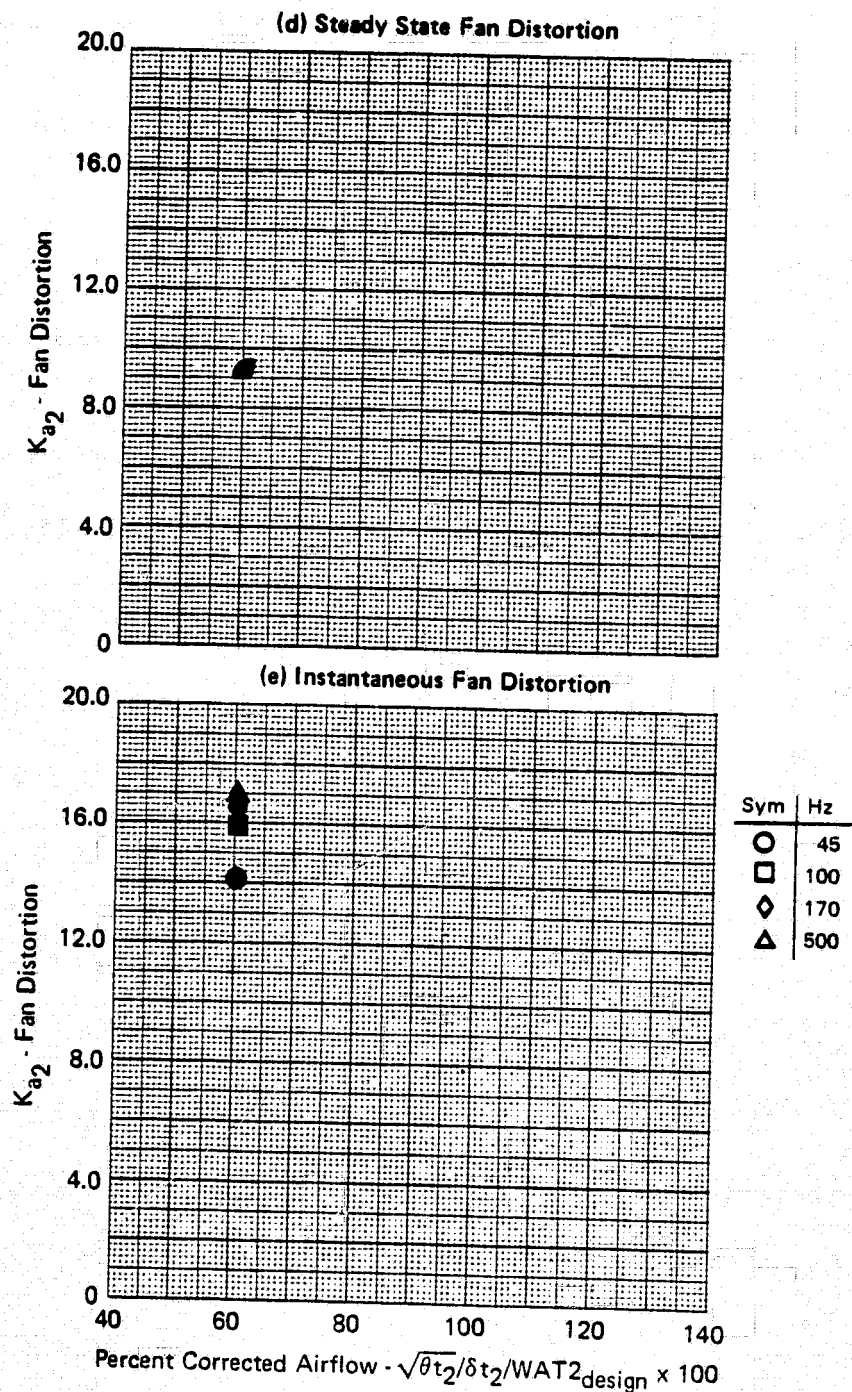
FSE - NASA Data Study
 Part/Point - 542/2, Ident 64
 RHO DELTA3 BYPASS CIVV
 -4.0 24.8 0.028(43.1) -25.00



GP77-0658-5

FIGURE G-64 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.2\%$

FSE - NASA Data Study
 Part/Point - 542/2, Ident 64
 RHO DELTA3 BYPASS CIVV
 -4.0 24.8 0.028(43.1) -25.00

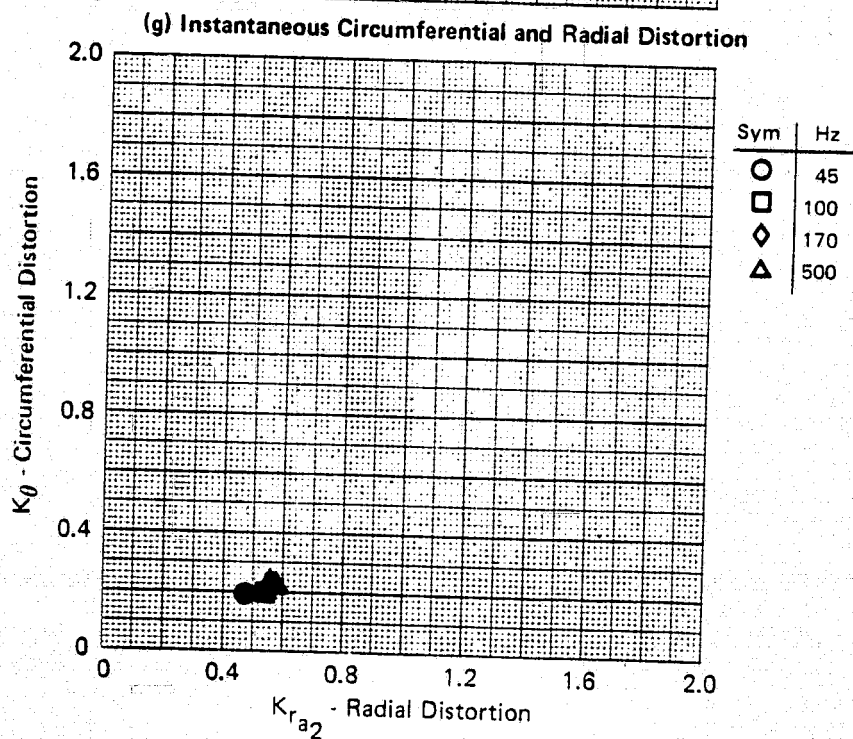
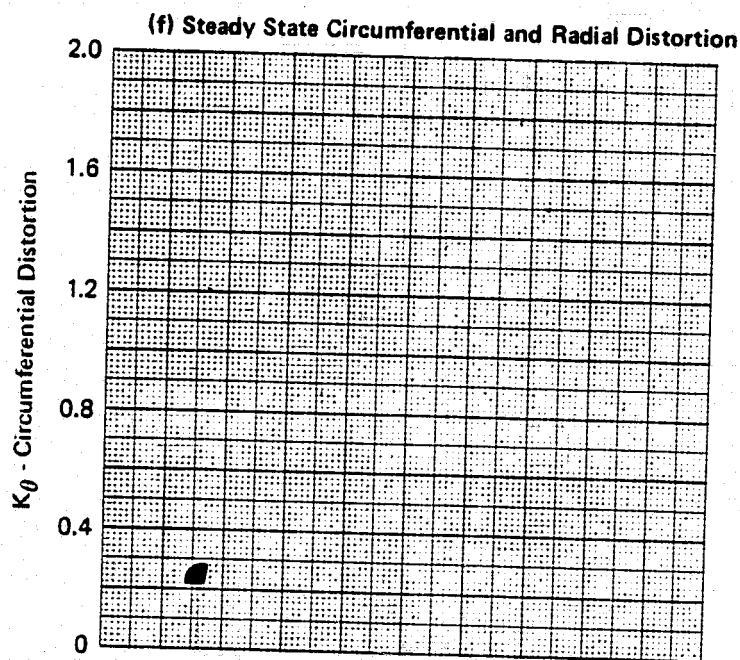


GP77-0658-3

FIGURE G-64 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.2\%$

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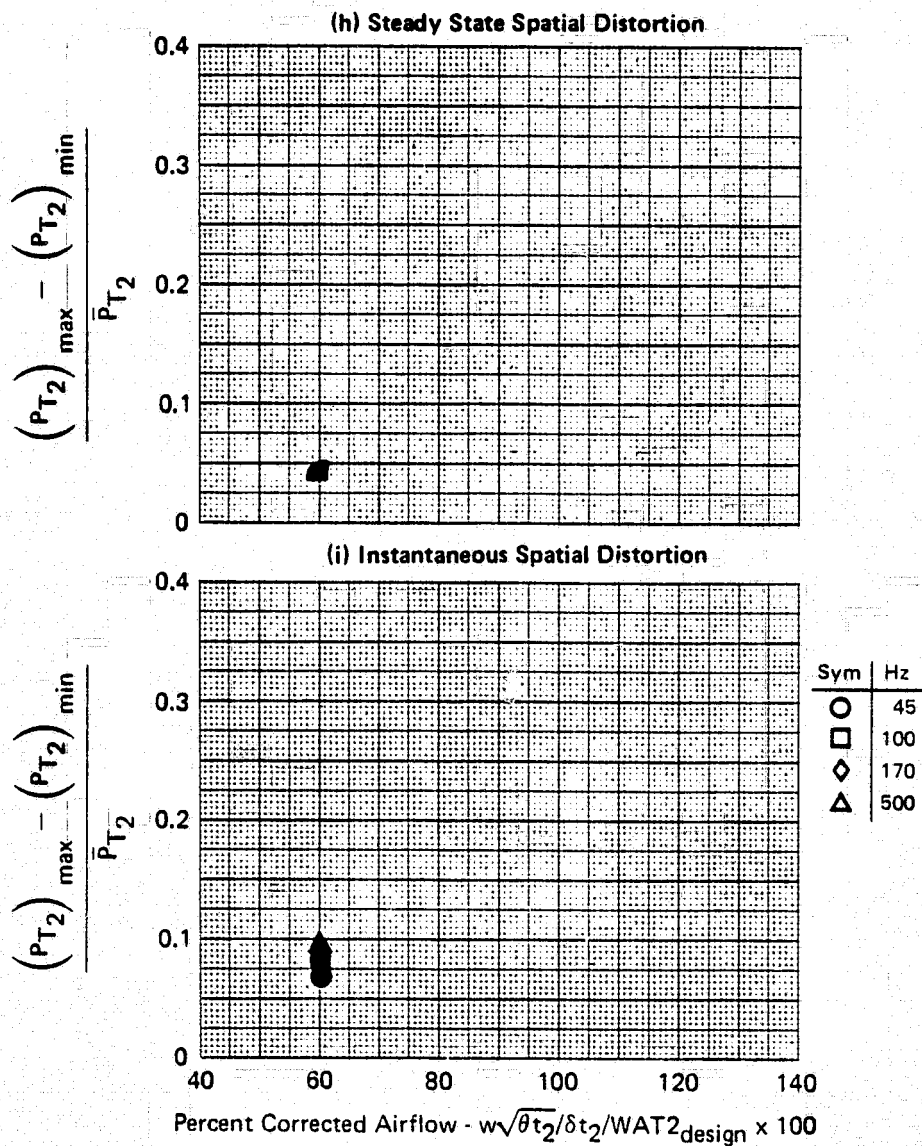
FSE - NASA Data Study
 Part/Point - 542/2, Ident 64
 RHO DELTA3 BYPASS CIVV
 -4.0 24.8 0.028(43.1) -25.00



GP77-0658-2

FIGURE G-64 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.2 %

FSE - NASA Data Study
 Part/Point - 542/2, Ident 64
 RHO DELTA3 BYPASS CIVV
 -4.0 24.8 0.028(43.1) -25.00



GP77-0658-4

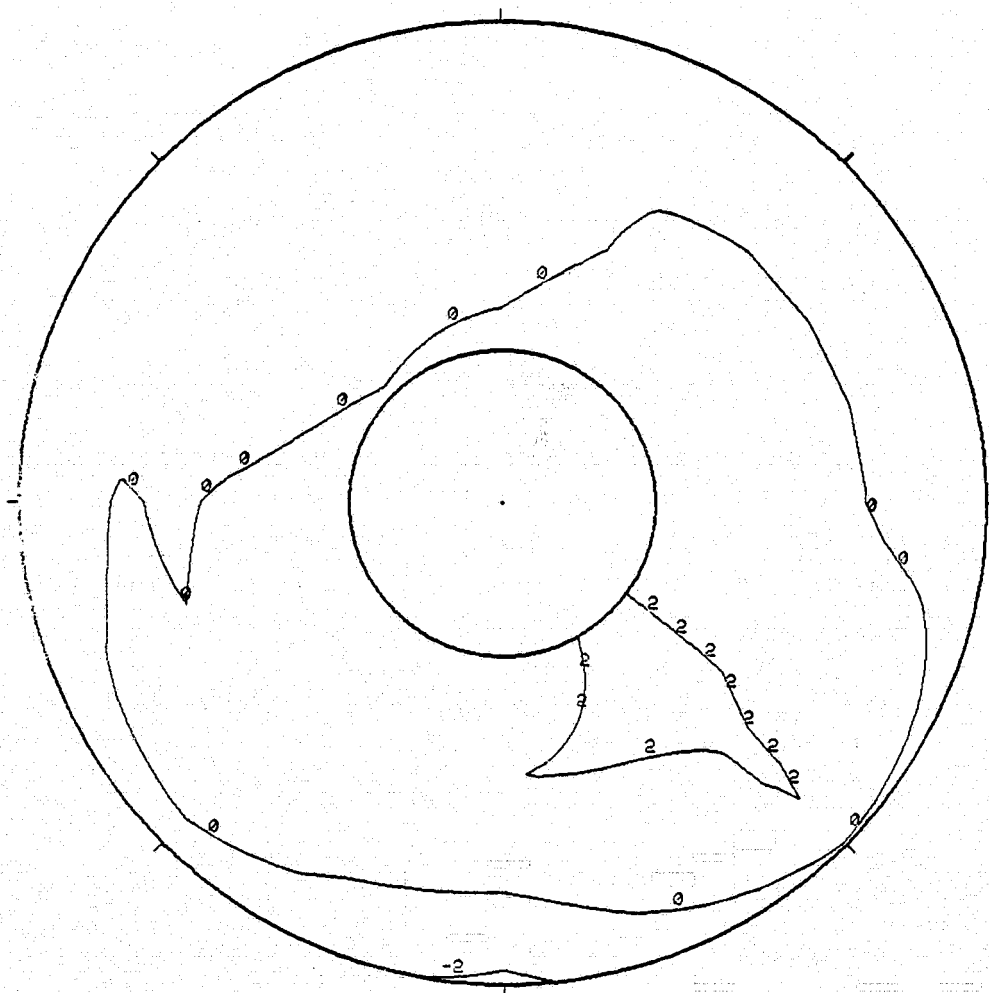
FIGURE G-64 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.2\%$

FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:48.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02781 (43.1)	WAT2 60.2%	CIVV -25.0
PT 56.06 (8.131)	PI/PS 1.027	KTHETA 0.242	KRA2 0.313	BKRA2 9.093	KR2 9.335	KC2 0.261	KESP 0.263
							D2 0.041

64 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 56.06 kPa (8.131 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-64 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.2\%$

FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:48.091

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

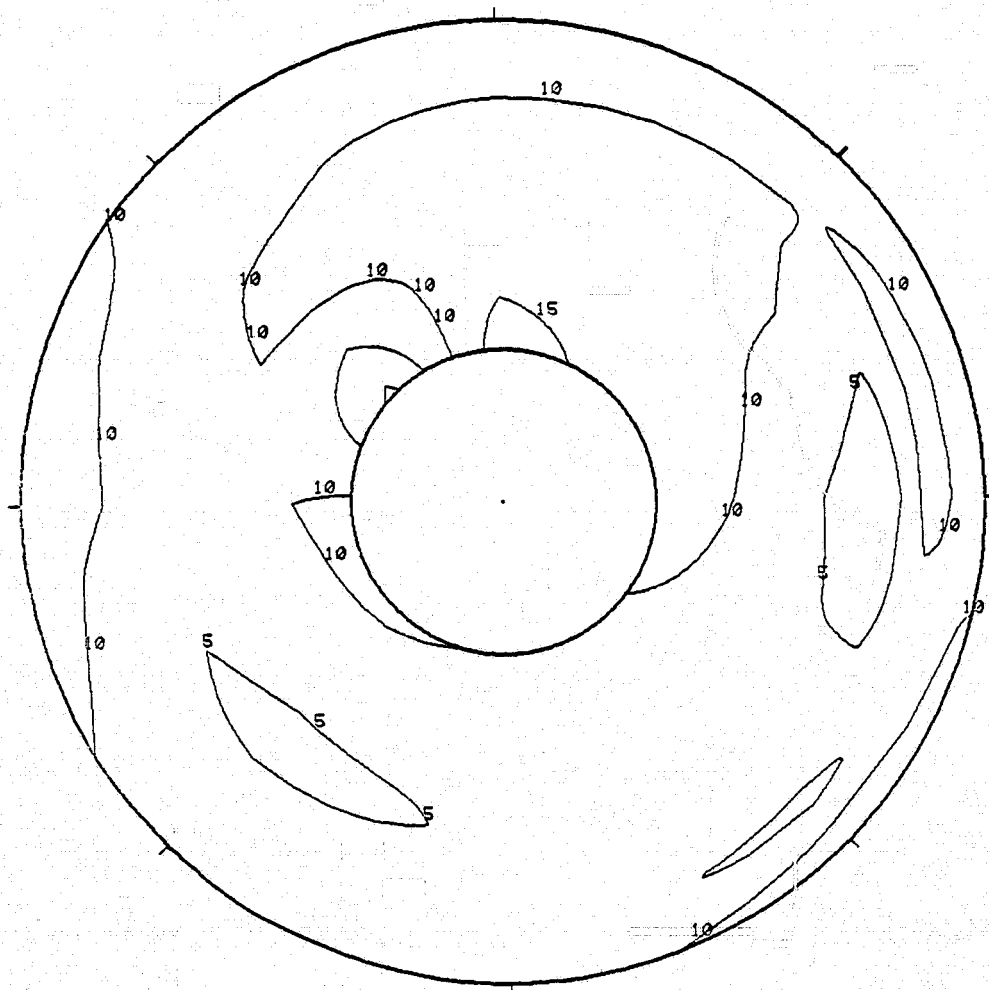
DELTA3
24.8

BYPASS
0.02781 (43.1)

WAT2
60.2%

CIVV
-25.0

64(k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00867

FIGURE G-64 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.2 %

FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:42.031

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

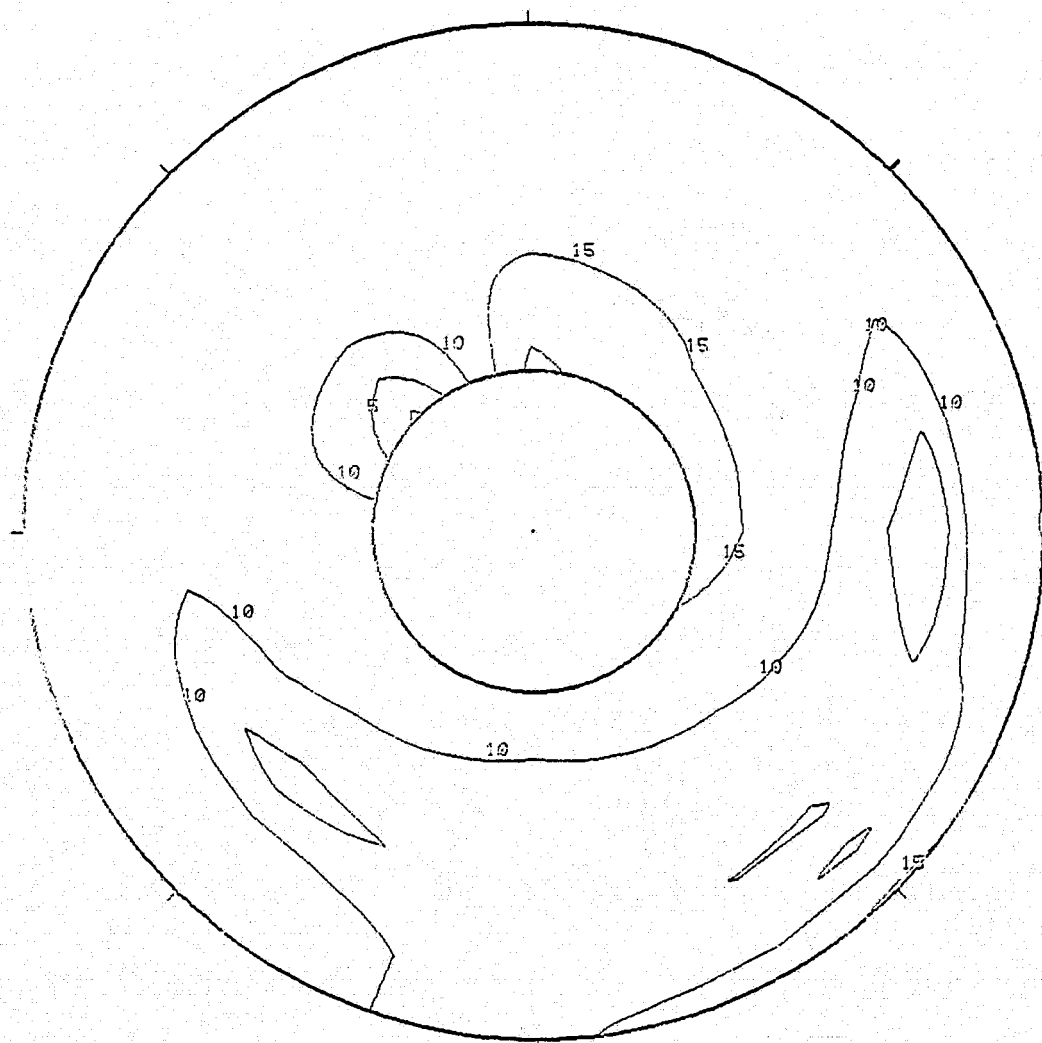
DELTA3
24.8

BYPASS
0.02781 (43.1)

WAT2
60.2%

CIVV
-25.0

64 (I) Turbulence Contour 100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01110

FIGURE G-64 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.2 %

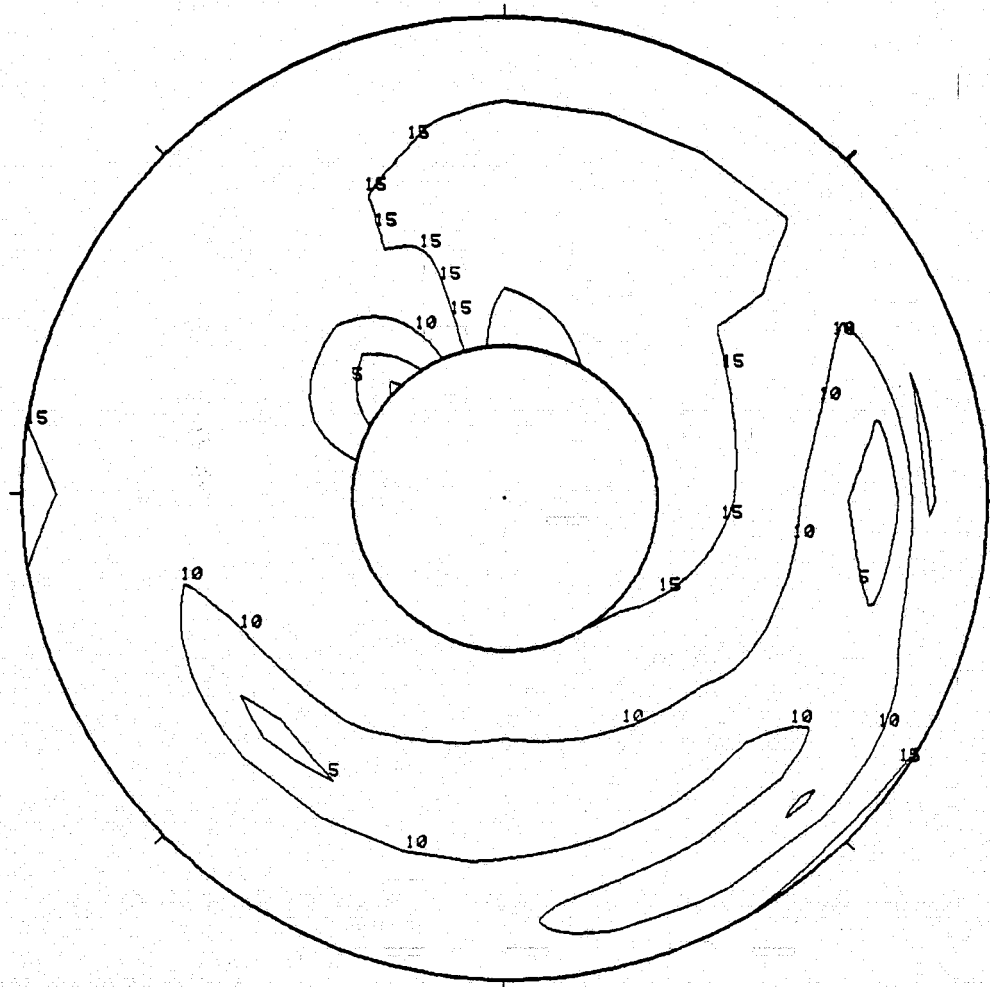
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FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:48.001

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02781 (43.1)	WAT2 60.2%	CIVV -25.9
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64(m) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01241

FIGURE G-64 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.2\%$

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FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:48.090

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

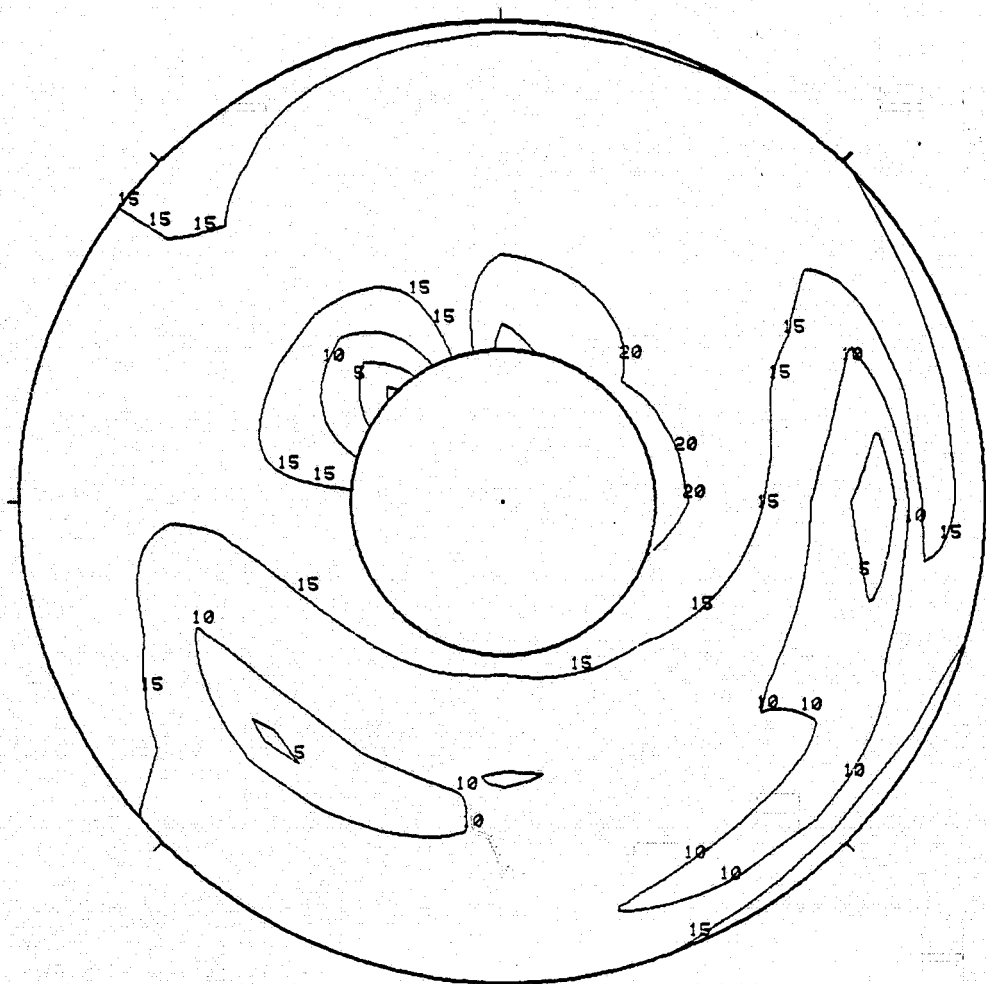
DELTA3
24.8

BYPASS
0.02781 (43.1)

WAT2
60.2%

CIVV
-25.0

64(n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01419

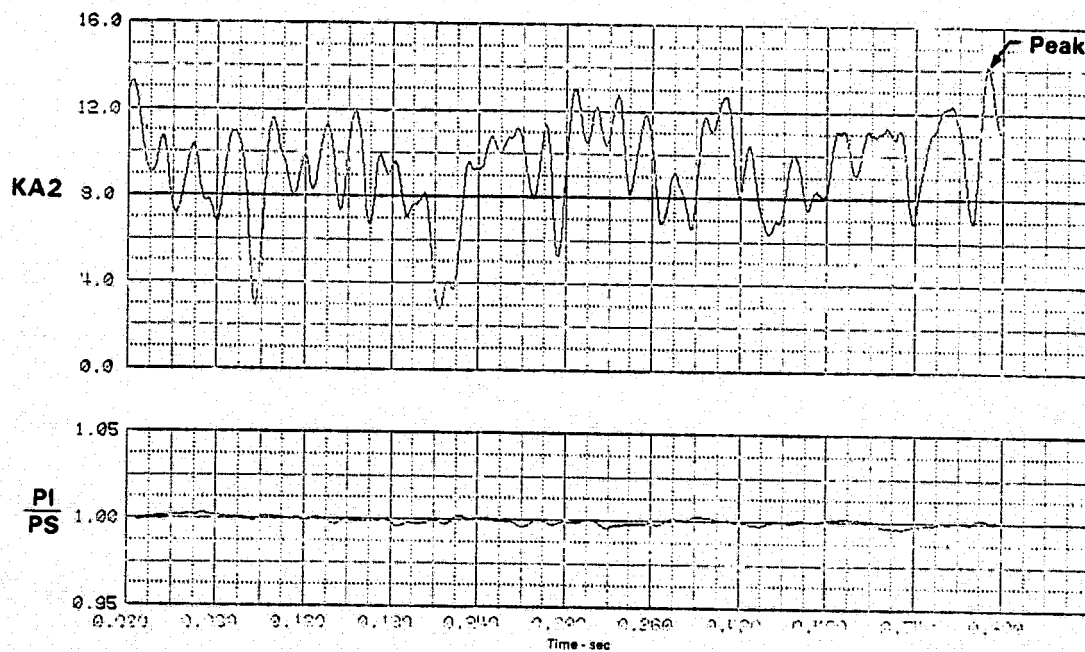
FIGURE G-64 Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.2\%$

FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:42.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02781 (43.1)	WAT2 60.2%	CIVV -25.0
P1 56.12 (8.140)	PI/PS 1.001	KTHETA 0.192	KRA2 0.420	BKRA2 13.953	KA2 14.151	KC2 0.114	KOSP 0.153
							D2 0.071

64(o) Time History Plots 45 Hz



PEAK AT TIME = 0.589690 SECONDS

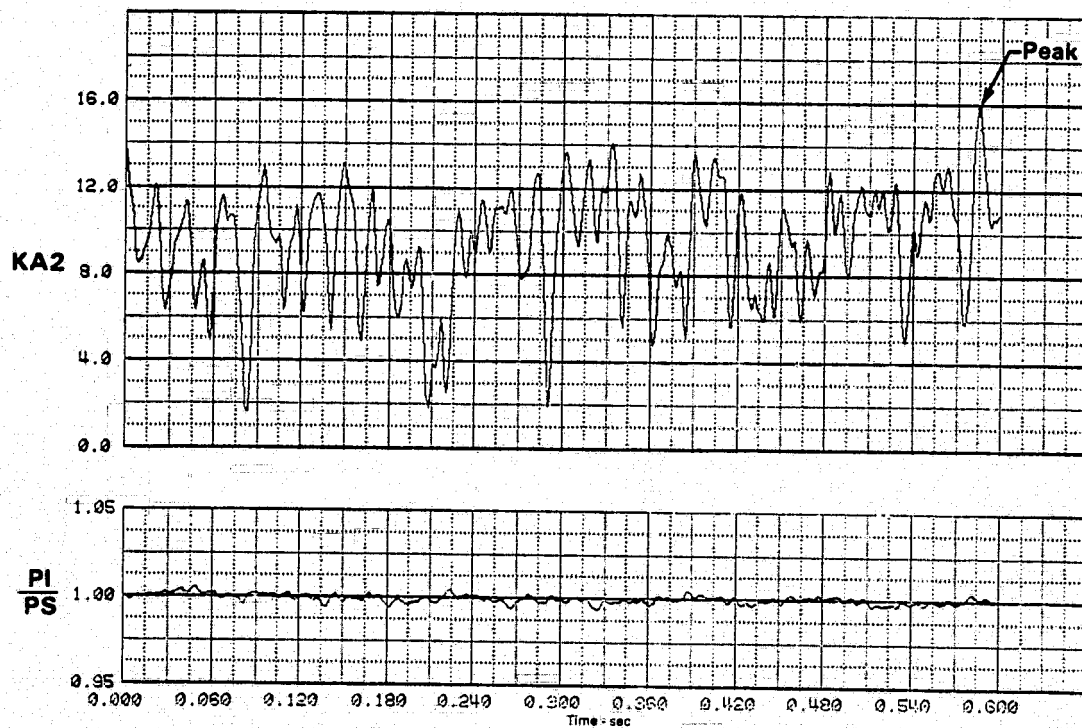
FIGURE G-64 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.2\%$

FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:48.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02781 (43.1)	WAT2 60.2%	CIVV -25.0
P1 56.19 (0.150)	PI/PS 1.002	KTHETA 0.194	KRA2 0.541	BKRA2 15.722	KA2 15.916	KC2 0.132	KOSP 0.132
							D2 0.084

64 (p) Time History Plots 100 Hz



PEAK AT TIME = 0.584280 SECONDS

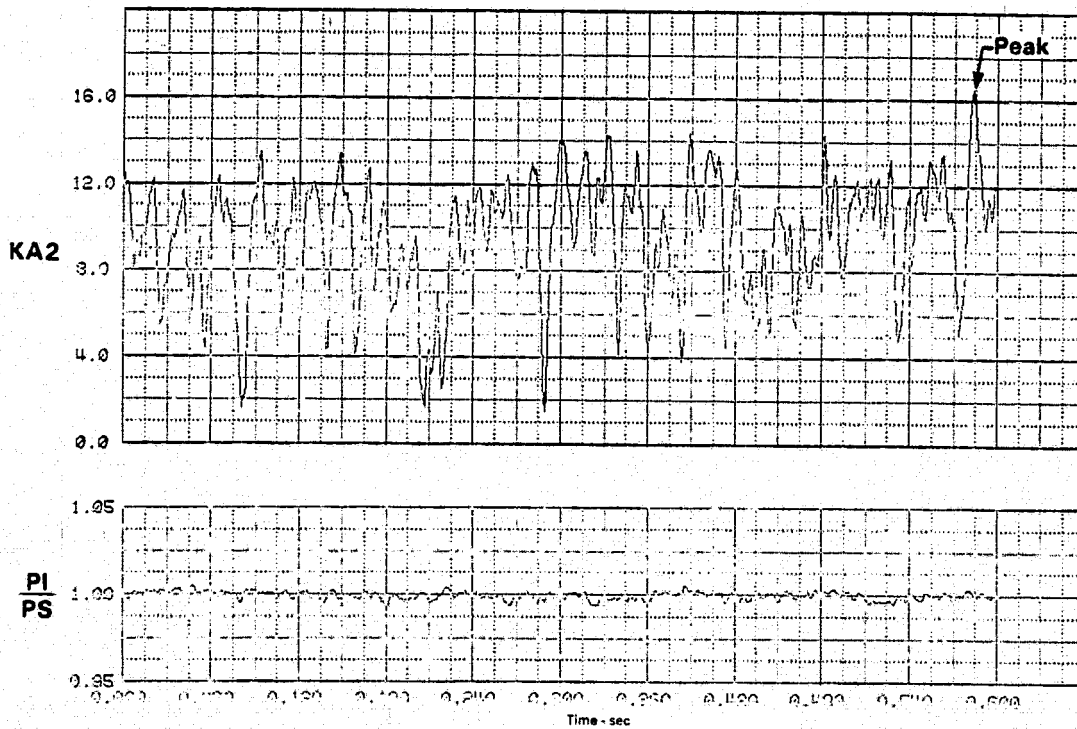
FIGURE G-64 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.2%

FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:48.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02781 (43.1)	WAT2 60.2%	CIVV -25.0
PI 56.13 (8.141)	PI/PS 1.001	KTHETA 0.227	KRA2 0.560	BKRA2 16.278	KA2 16.504	KC2 0.192	KOSP 0.157
							O2 0.090

64(q) Time History Plots 170 Hz



PEAK AT TIME = 0.583198 SECONDS

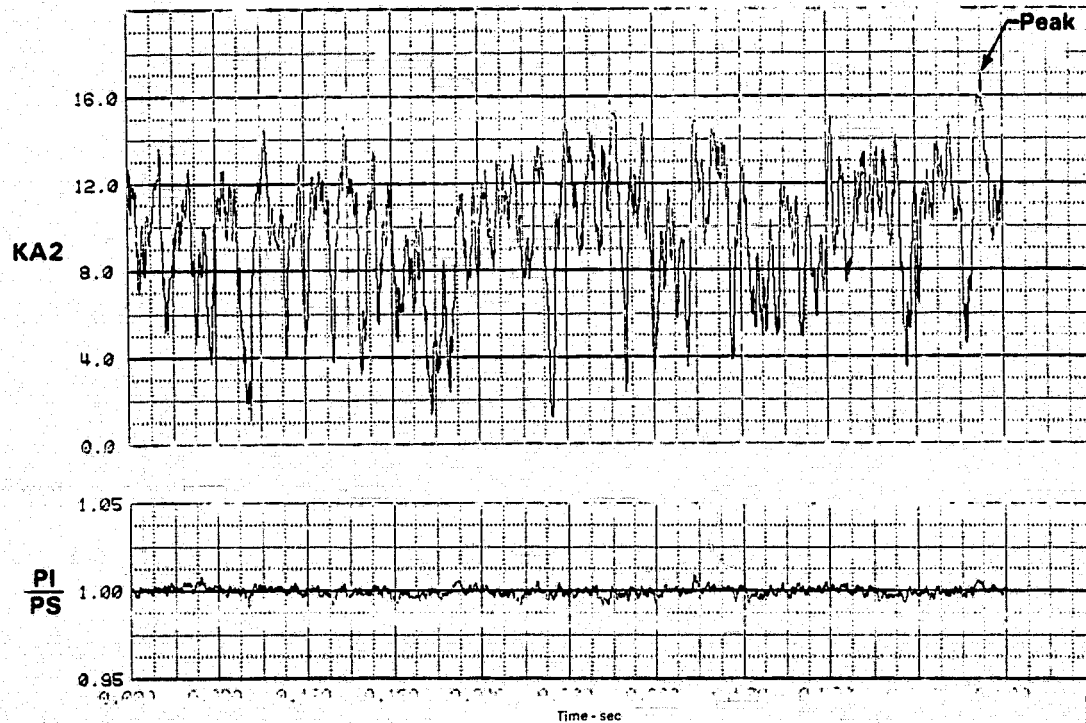
FIGURE G-64 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.2%

FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:43.030

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02781 (43.1)	WAT2 60.2%	CIVV -25.0
P1 6.10 (8.136)	P1/PS 1.001	KTHETA 0.212	KRA2 0.577	BKRA2 16.760	KA2 16.972	KC2 0.131	KOSP 0.174
							O2 0.094

64(r) Time History Plots 500 Hz



PEAK AT TIME = 0.585360 SECONDS

FIGURE G-64 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.2%

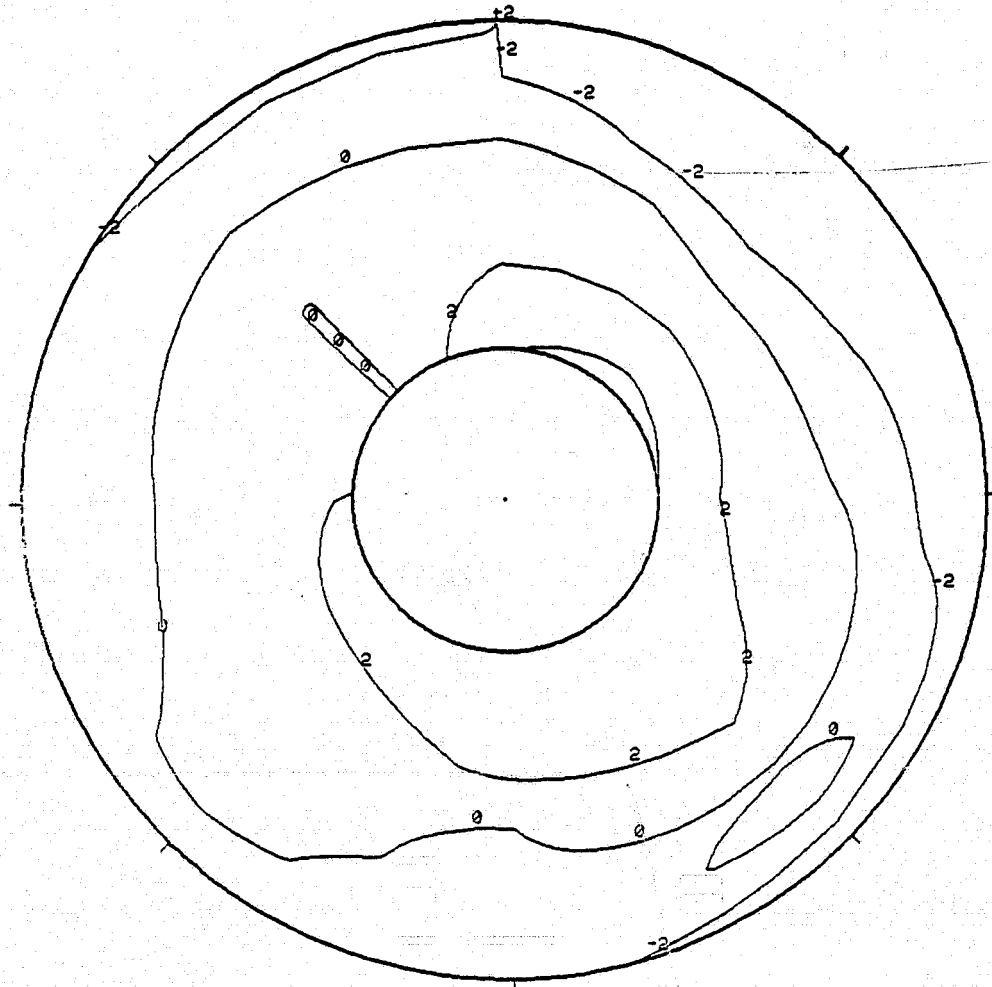
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FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:48.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02781 (43.1)	WAT2 60.2%	CIVV -25.0
PI 56.12 (8.140)	PI/PS 1.001	KTHETA 0.192	KRA2 0.430	BKRA2 13.959	KA2 14.151	KC2 0.114	KOSP 0.158
							D2 0.071

64(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz



MEAN FACE PRESSURE = 56.12 kPa (8.140 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.589690 SECONDS

FIGURE G-64 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.2 %

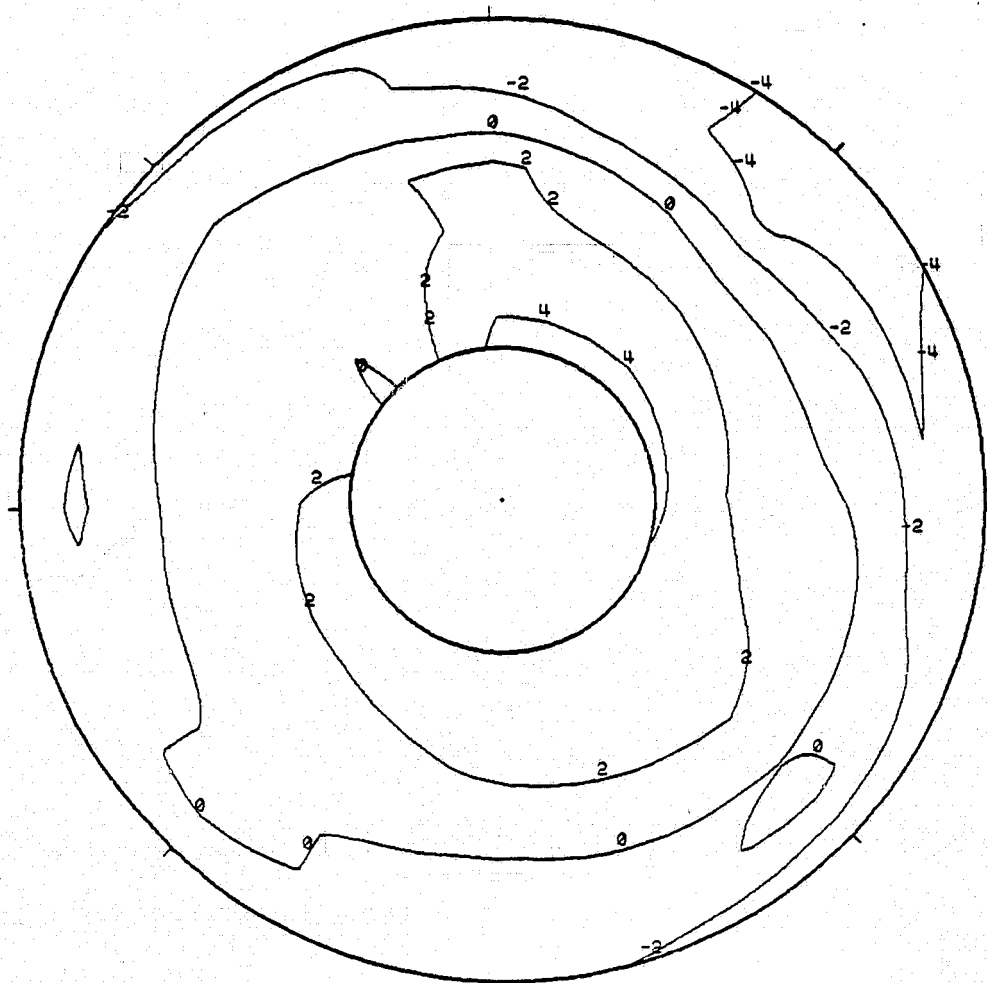
FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:48.001

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
2.2	-2	0	-4.0	24.8	0.02781 (43.1)	60.2%	-25.0

P1	P1/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
56.19 (8.150)	1.002	0.194	0.541	15.722	15.916	0.182	0.132	0.084

64(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz



MEAN FACE PRESSURE = 56.19 kPa (8.150 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.584280 SECONDS

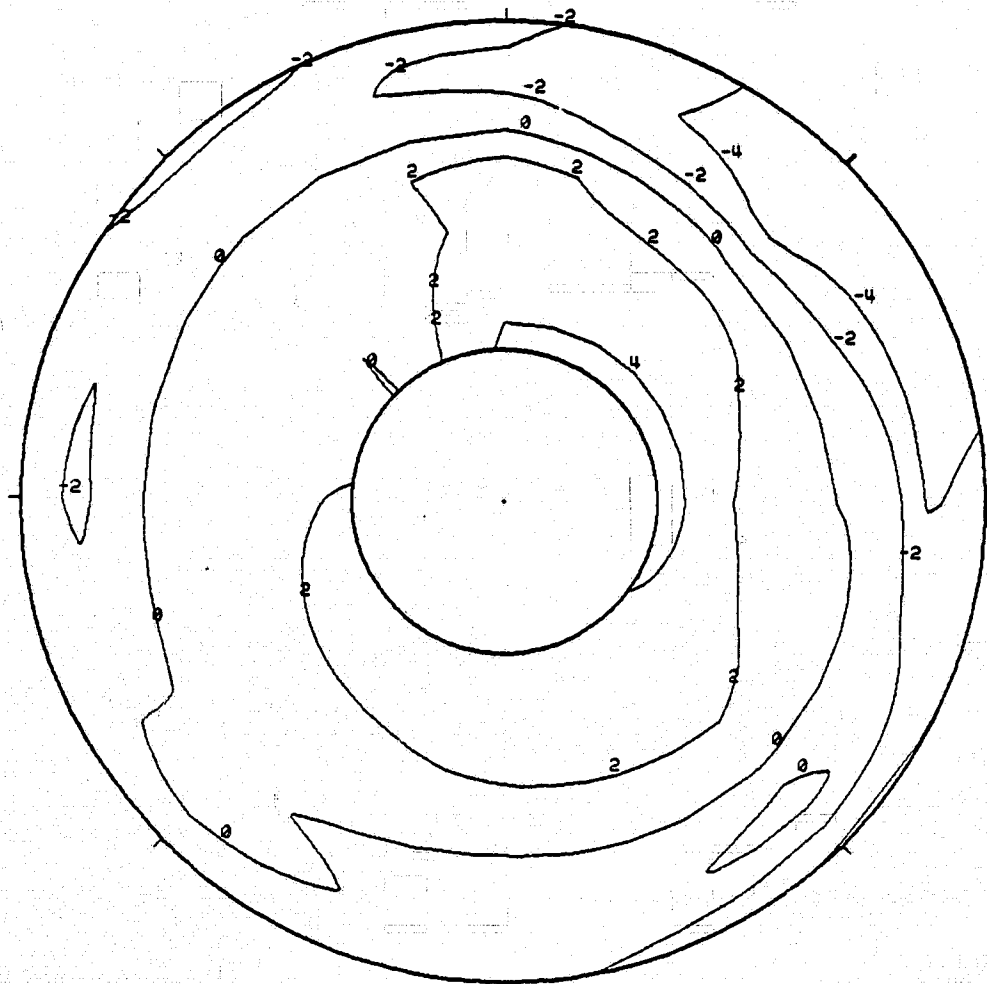
FIGURE G-64 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.2 %

FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:48.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02781 (43.1)	WAT2 60.2%	CIVV -25.0
P1 56.13 (8.141)	P1/PS 1.001	KTHETA 0.227	KRA2 0.569	BKRA2 16.278	KAP 16.504	KC2 0.132	KOSP 0.157
							D2 0.090

64(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 56.13 kPa (8.141 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.583198 SECONDS

FIGURE G-64 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.2 %

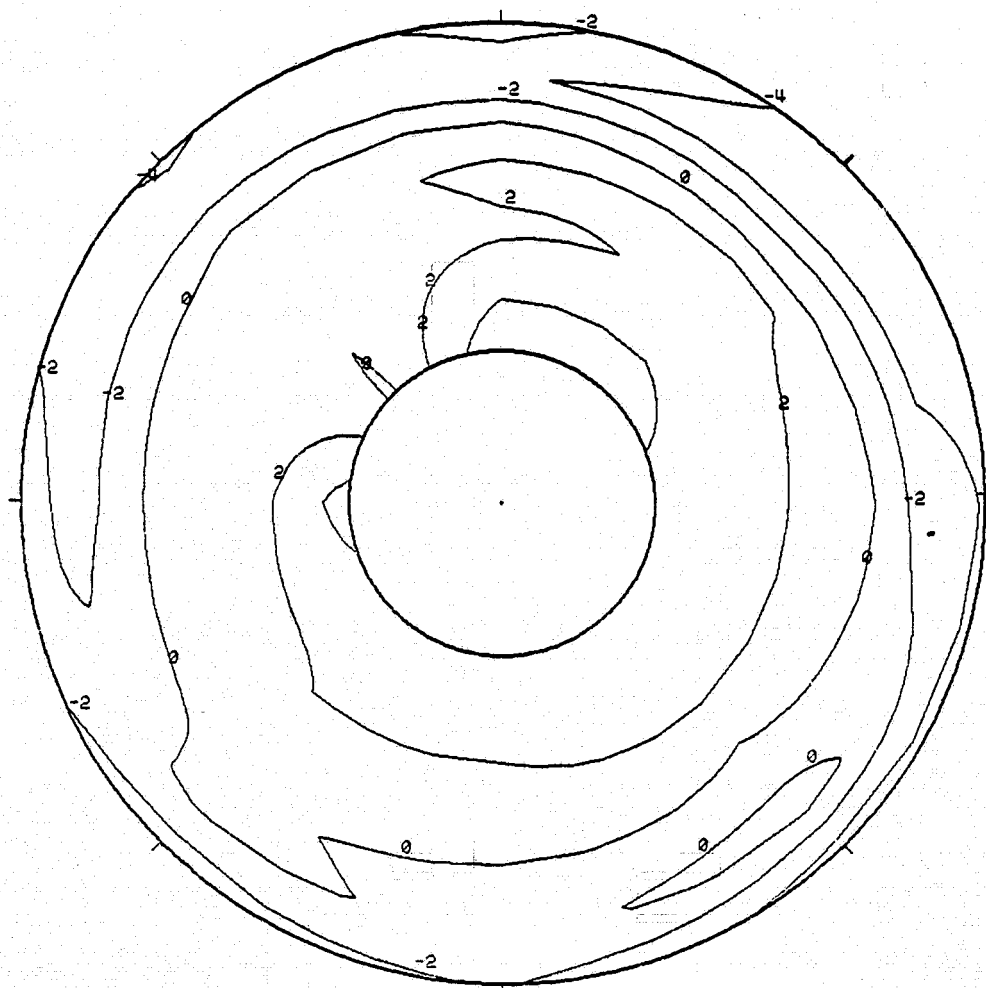
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FSE - NASA DATA STUDY

DATA PART/POINT 542 / 2 IDENT. 64
THE SEGMENT START TIME WAS AT 22:51:48.090

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.9	BYPASS 0.02781 (43.1)	WAT2 60.2%	CIVV -25.0
P1 56.10 (8.136)	P1/PS 1.001	KTHETA 0.212	KRA2 0.577	BKRA2 16.760	KA2 16.972	KC2 0.131	KOSP 0.174
							D2 0.004

64(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz



MEAN FACE PRESSURE = 56.10 kPa (8.136 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.585360 SECONDS

FIGURE G-64 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.2 %

FSE - NASA Data Study
 Part/Point - 543/4, Ident 65
 RHO DELTA3 BYPASS CIVV
 -4.0 24.8 0.022(34.5) -25.00

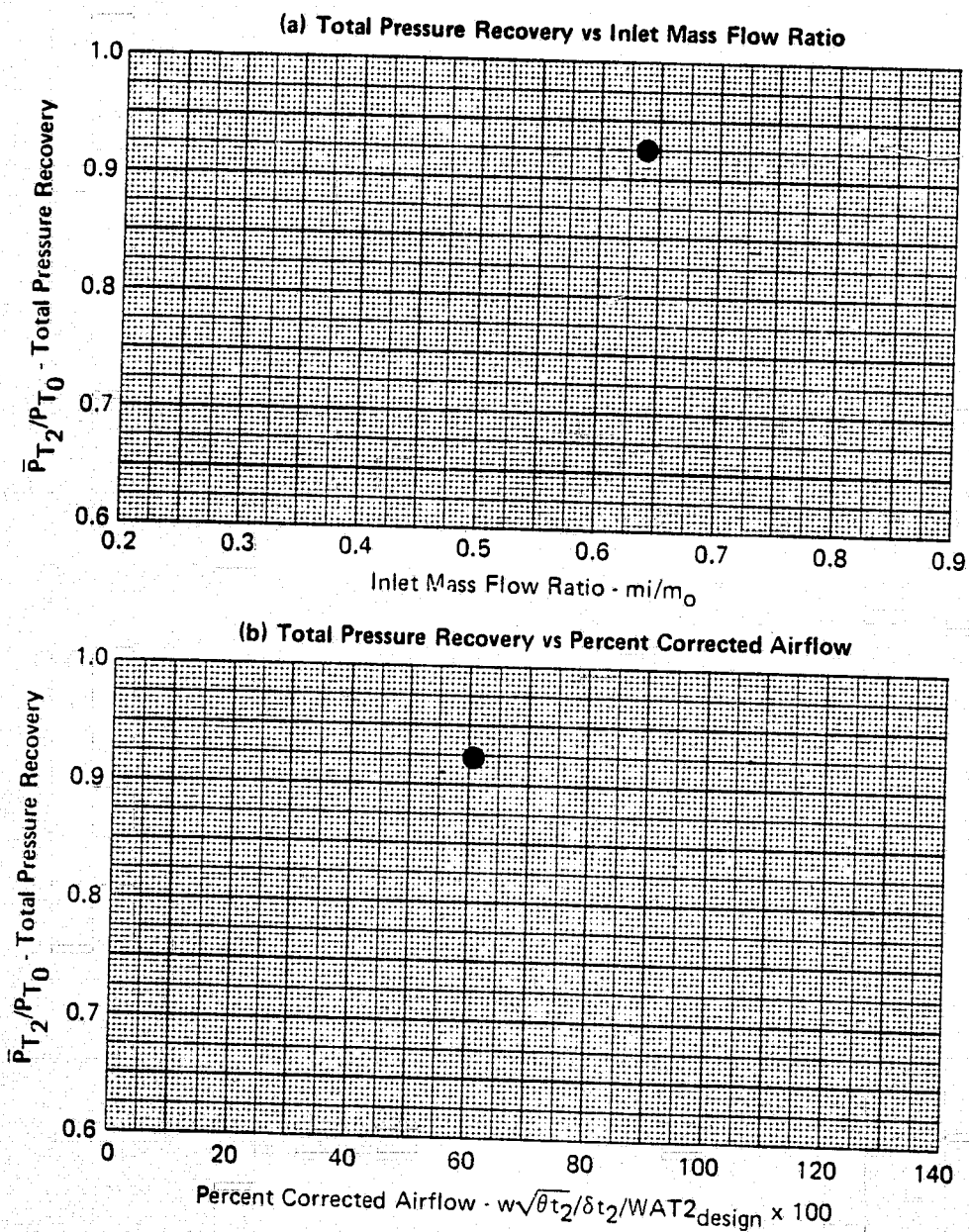
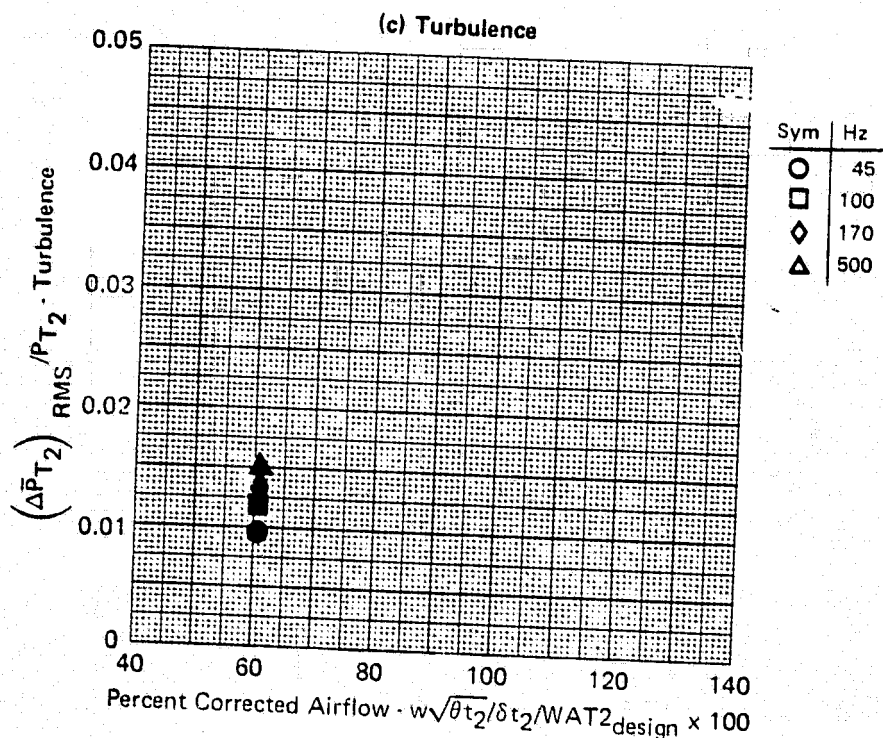


FIGURE G-65
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = -2.0, \beta = 0.0, WAT2 = 60.5 \%$

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FSE - NASA Data Study
 Part/Point - 543/4, Ident 65
 RHO DELTA3 BYPASS CIVV
 -4.0 24.8 0.022(34.5) -25.00



GP77-0658-5

FIGURE G-65 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.5\%$

FSE - NASA Data Study
 Part/Point - 543/4 Ident 65
 RHO DELTA3 BYPASS CIVV
 -4.0 24.8 0.022(34.5) -25.00

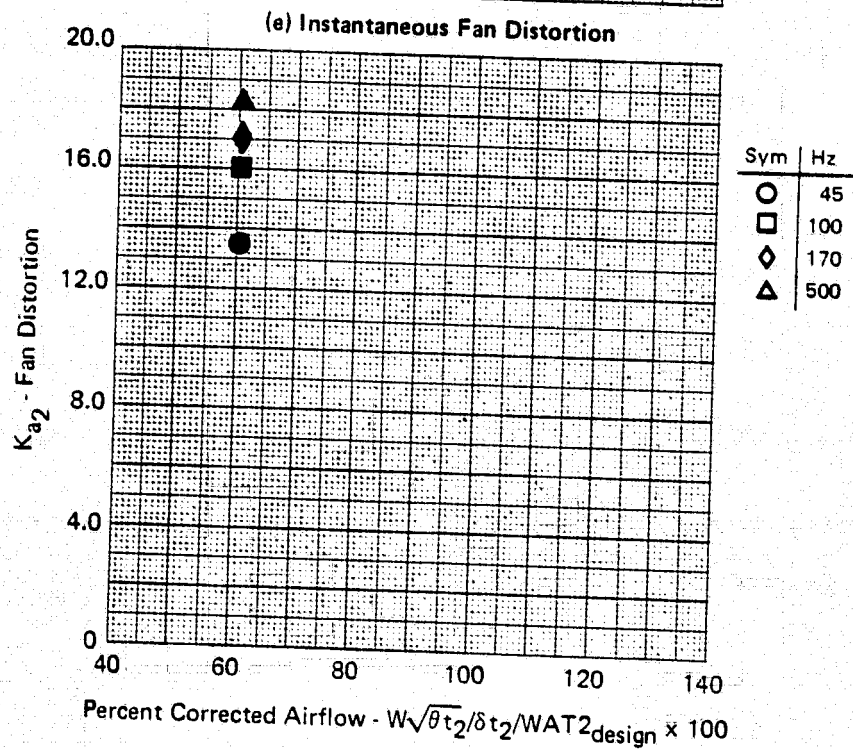
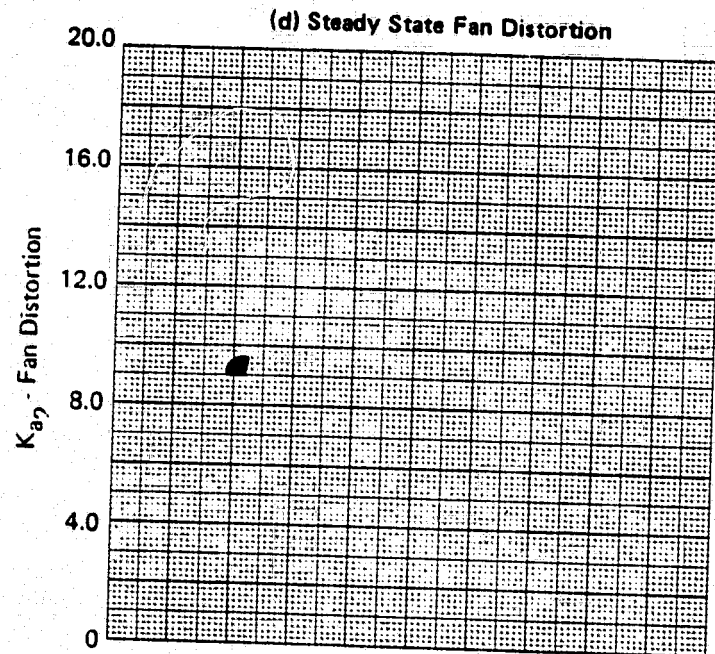


FIGURE G-65 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.5\%$

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FSE - NASA Data Study
 Part/Point - 543/4, Ident 65
 RHO DELTA3 BYPASS CIVV
 -4.0 24.8 0.022(34.5) -25.00

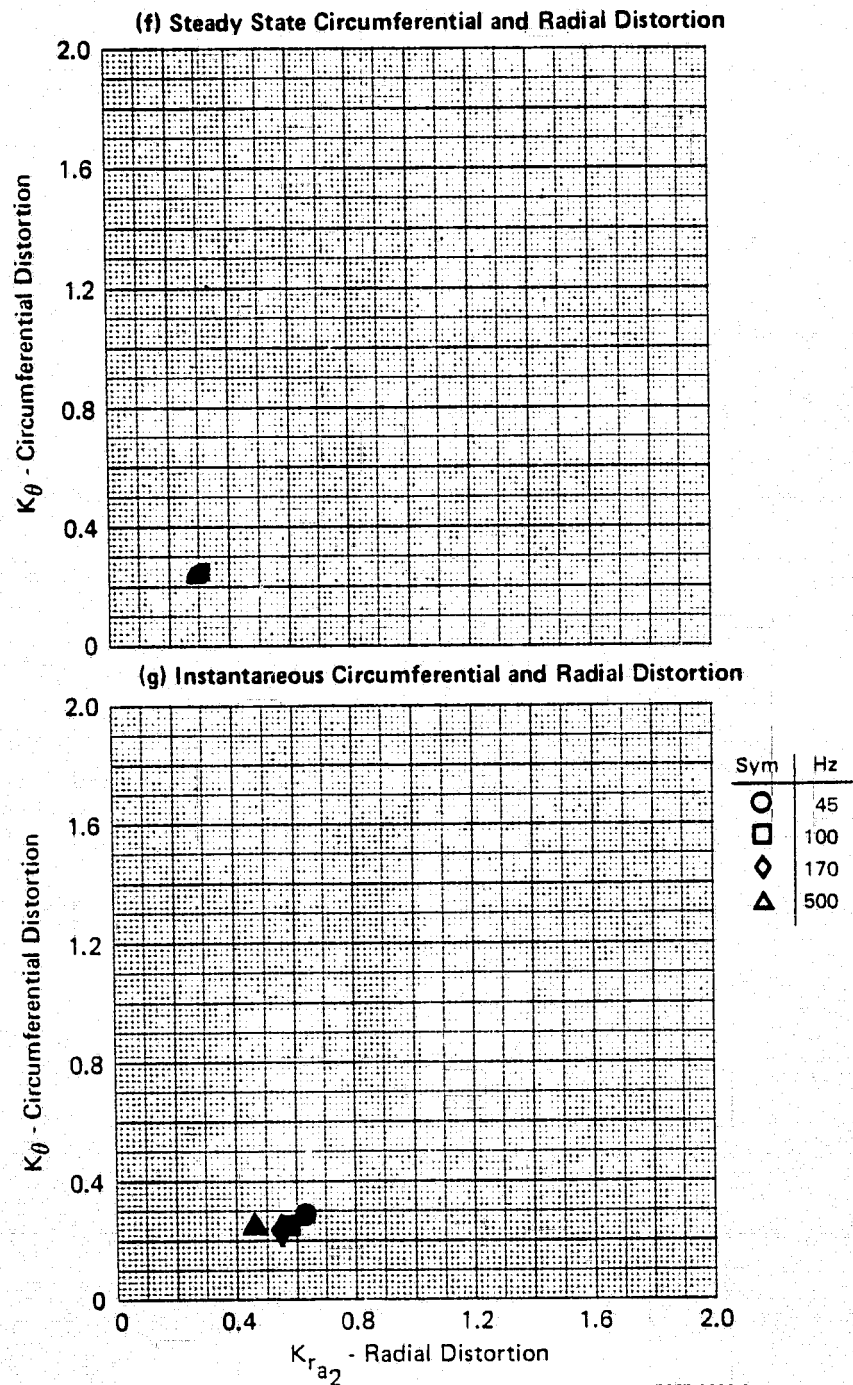


FIGURE G-65 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.5 %

FSE - NASA Data Study
 Part/Point - 543/4, Ident 65
 RHO DELTA3 BYPASS CIVV
 -4.0 24.8 0.022(34.5) -25.00

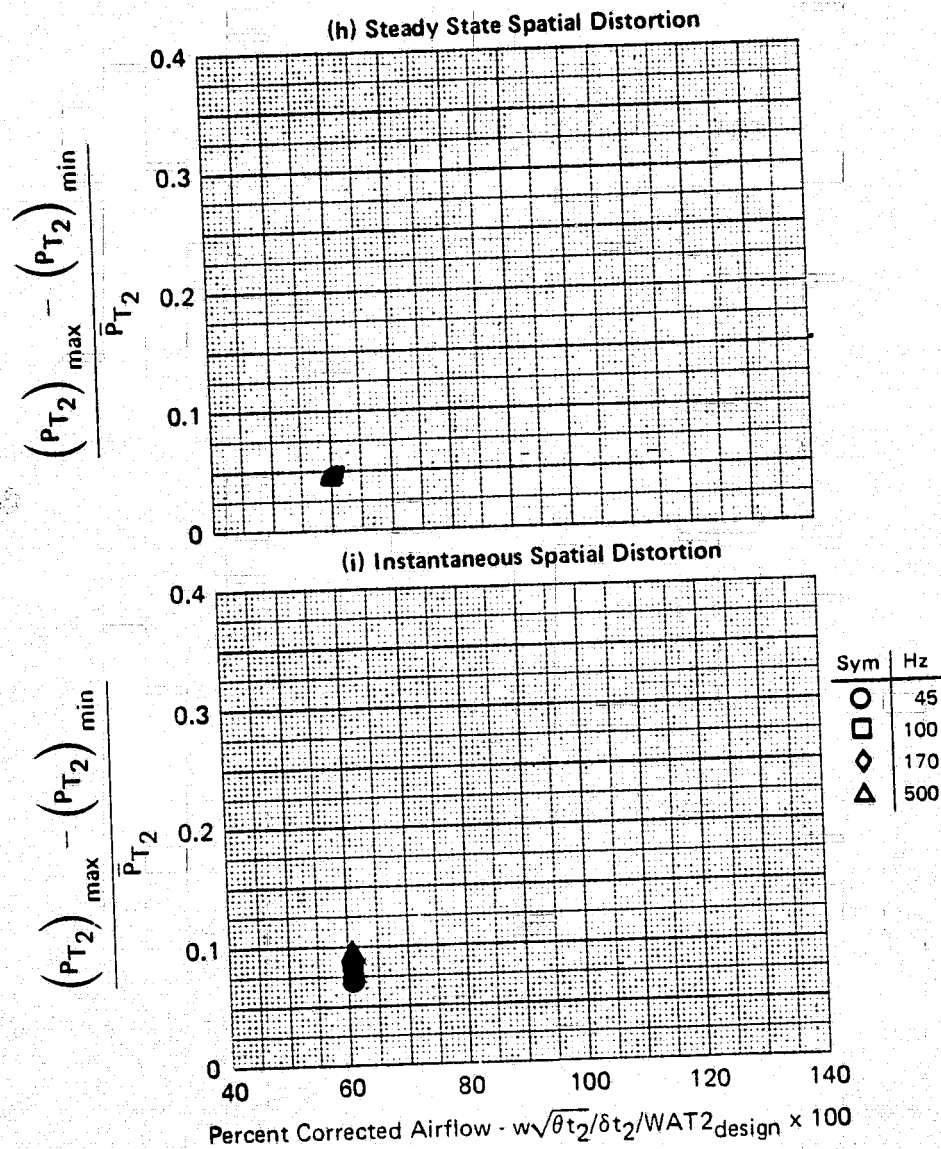


FIGURE G-65 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.5\%$

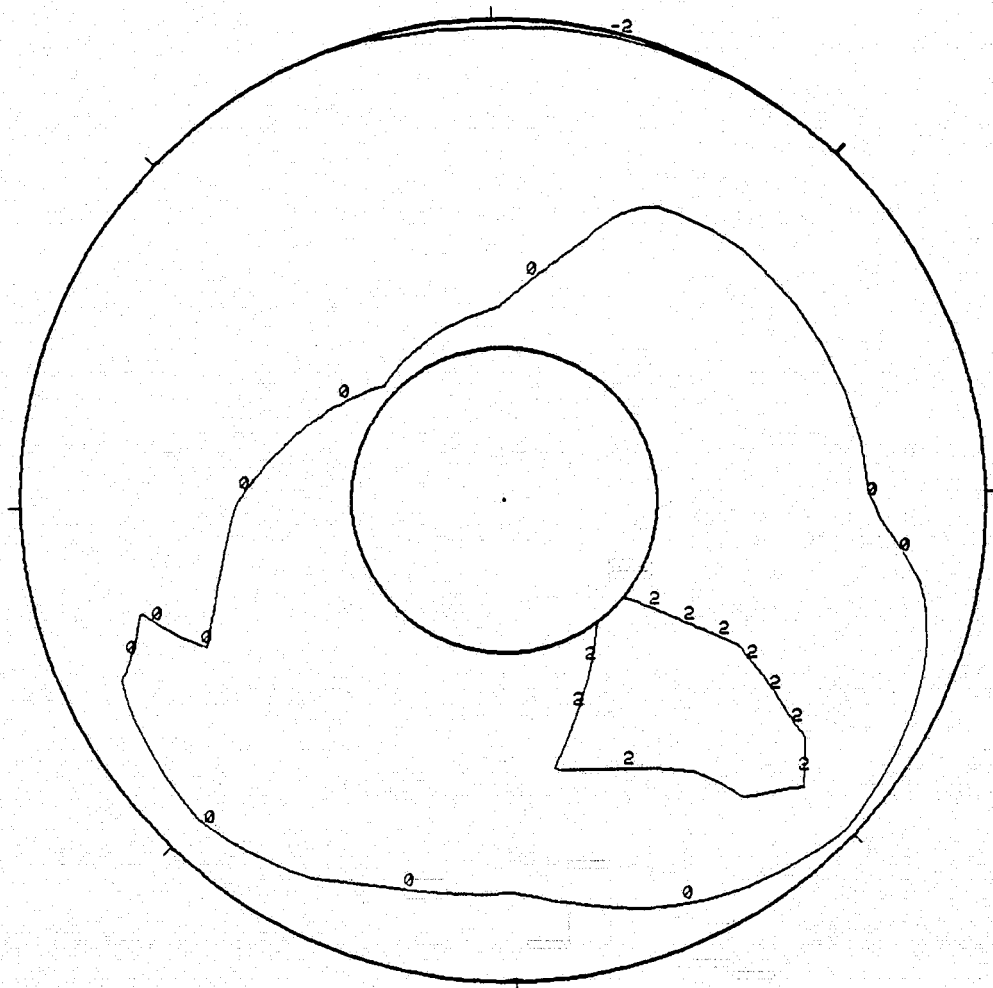
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FSE - NASA DATA STUDY

DATA PART/POINT 543 / 4 IDENT. 65
THE SEGMENT START TIME WAS AT 23:12: 7.092

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02226 (34.5)	WAT2 60.5%	CIVV -25.0
P1 55.78 (8.090)	P1/PS 1.000	KTHETA 0.245	KRA2 0.313	BKRA2 9.005	KA2 9.250	KC2 0.260	KESP 0.265
							D2 0.043

65 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 55.78 kPa (8.090 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

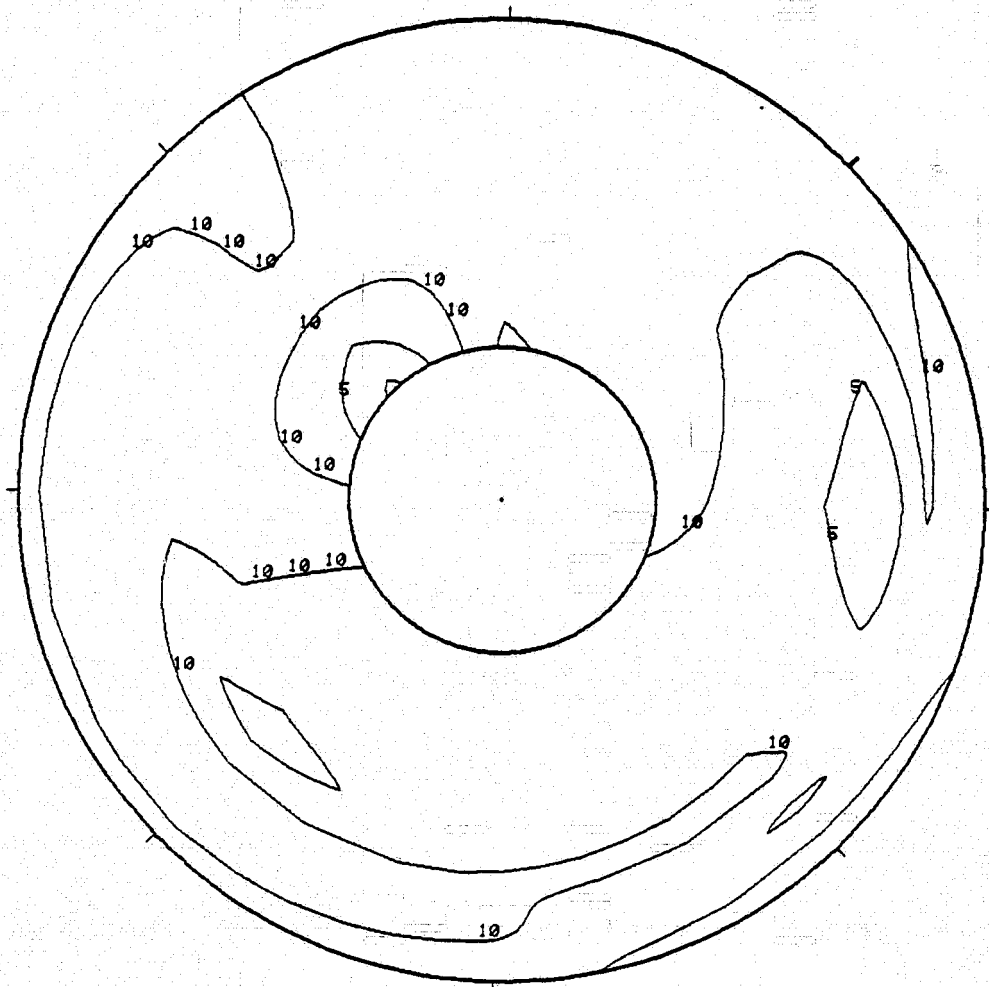
FIGURE G-65 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.5 %

FSE - NASA DATA STUDY

DATA PART/POINT 543/4 IDENT. 65
THE SEGMENT START TIME WAS AT 23:12: 7.092

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02226 (34.5)	WAT2 60.5%	CIVV -25.0
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65(k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00952

FIGURE G-65 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.5\%$

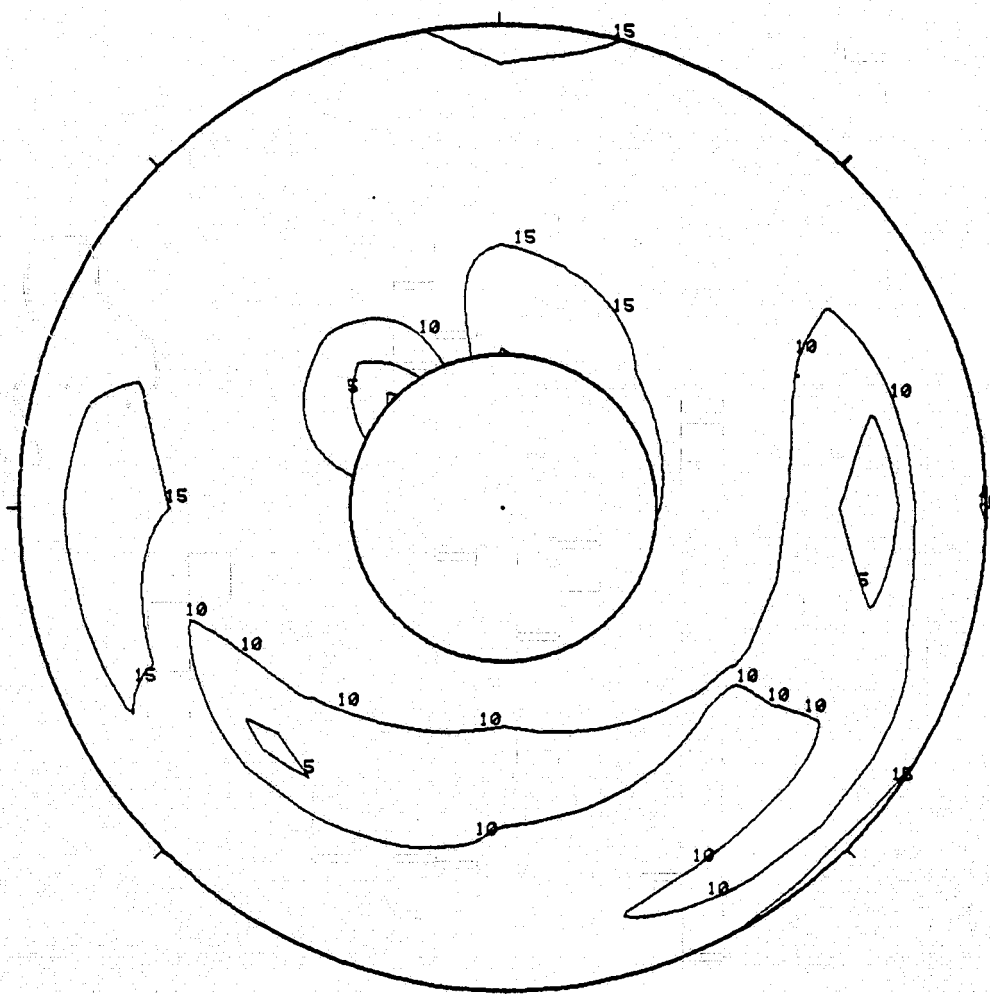
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FSE - NASA DATA STUDY

DATA PART/POINT 543 / 4 IDENT. 65
THE SEGMENT START TIME WAS AT 23:12: 7.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02226 (34.5)	WAT2 60.5%	CIVV -25.0
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65(I) Turbulence Contour 100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01209

FIGURE G-65 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.5 %

FSE - NASA DATA STUDY

DATA PART/POINT 543 / 4 IDENT. 65
THE SEGMENT START TIME WAS AT 23:12: 7.092

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

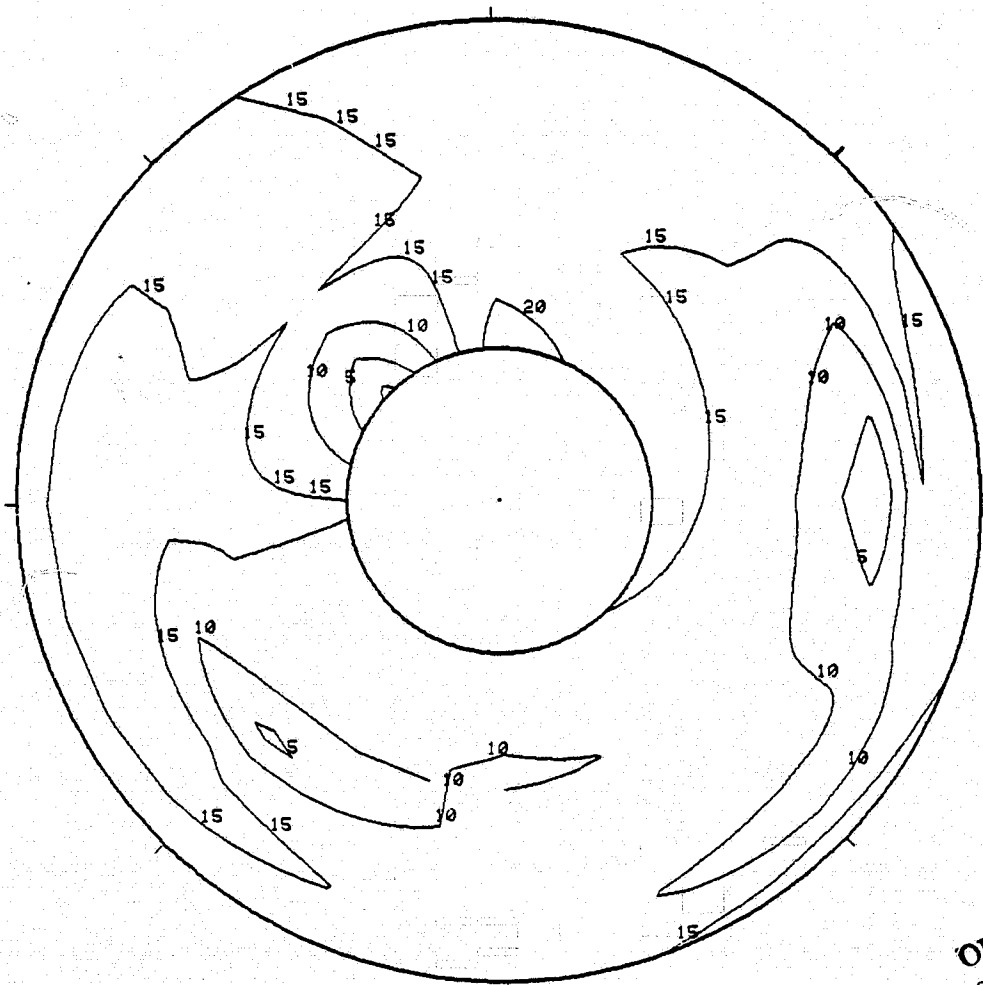
DEL T83
24.8

BYPASS
0.02226 (34.8)

WAT2
60.5%

CIVV
-25.0

65(m) Turbulence Contour 170 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01352

FIGURE G-65 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.5 %

FSE - NASA DATA STUDY

DATA PART/POINT 543 / 4 IDENT. 65
THE SEGMENT START TIME WAS AT 23:12: 7.089

MACH
2.2

ALPHA
-2

BETA
0

RHO
-4.0

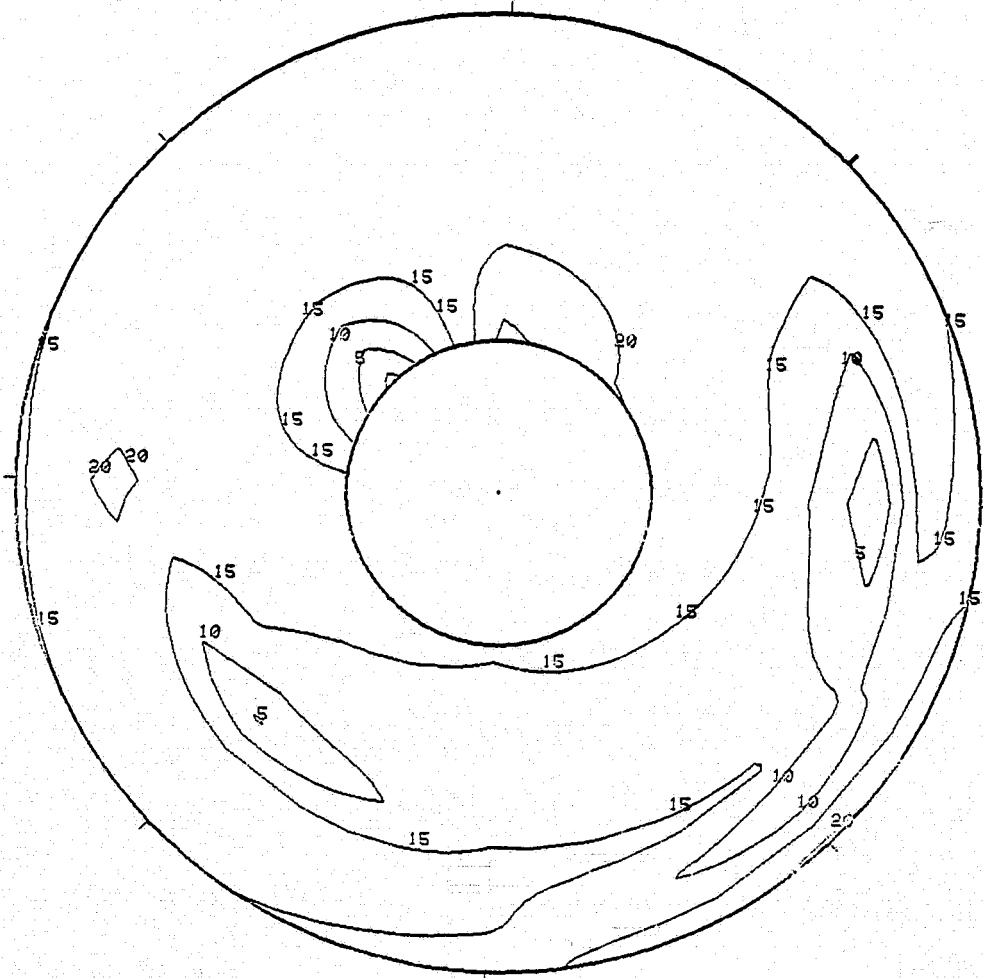
DELTA3
24.8

BYPASS
0.02226 (34.5)

WAT2
60.5%

CIVV
-25.0

65 (n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01539

FIGURE G-65 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.5 %

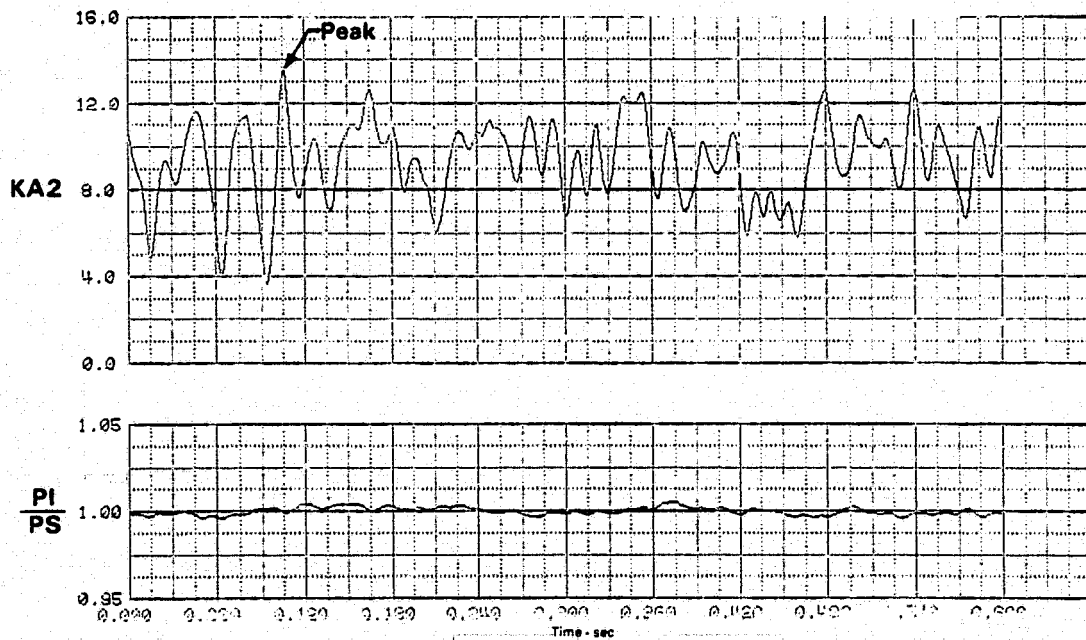
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FSE - NASA DATA STUDY

DATA PART/POINT 543 / 4 IDENT. 65
THE SEGMENT START TIME WAS AT 23:12: 7.092

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02226 (34.5)	WAT2 60.5%	CIVV -25.0
P1 55.74 (8.084)	P1/PS 0.999	KTHETA 0.253	KRA2 0.461	BKRA2 13.253	KA2 13.516	KC2 0.273	KOSP 0.289
							D2 0.070

65(o) Time History Plots 45 Hz



PEAK AT TIME = 0.106036 SECONDS

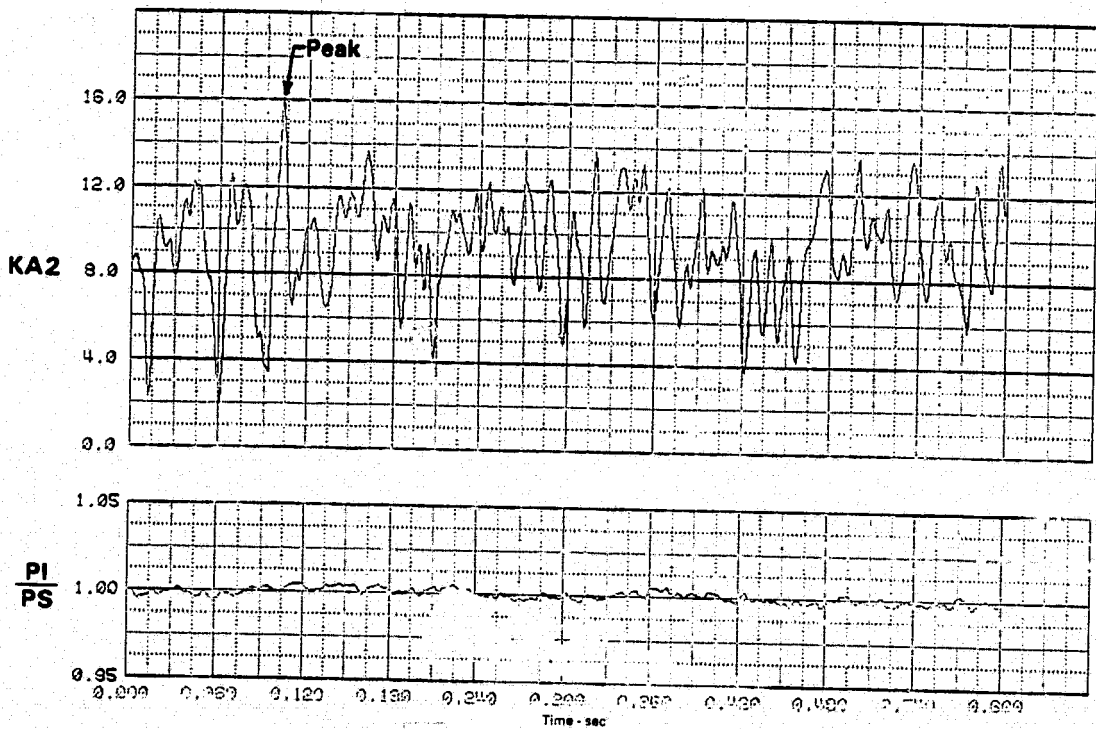
FIGURE G-65 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.5 %

FSE - NASA DATA STUDY

DATA PART/POINT 543 / 4 IDENT. 65
THE SEGMENT START TIME WAS AT 23:12: 7.091

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02228 (34.5)	WAT2 60.5%	CIVV -25.0
P1 55.72 (8.081)	PI/PS 0.999	KTHETA 0.243	KRA2 0.549	BKRA2 15.778	KA2 16.021	KC2 0.313	KOSP 0.271
							D2 0.001

65(p) Time History Plots 100 Hz



PEAK AT TIME = 0.101708 SECONDS

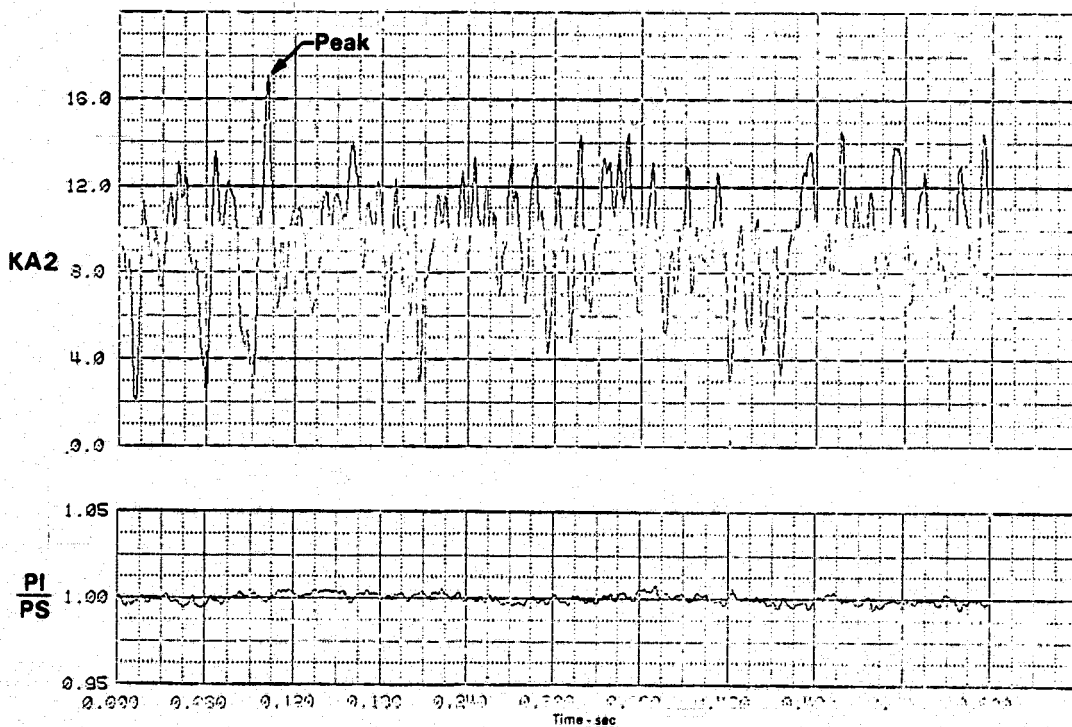
FIGURE G-65 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.5 %

FSE - NASA DATA STUDY

DATA PART/POINT 543 / 4 IDENT. 65
THE SEGMENT START TIME WAS AT 23:12: 7.092

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02226 (34.5)	WAT2 60.5%	CIVV -25.0
P1 55.66 (8.073)	PI/PS 0.998	KTHETA 0.255	KPA2 0.584	BKPA2 16.790	KA2 17.045	KC2 0.272	KOSP 0.279
							O2 0.035

65(q) Time History Plots 170 Hz



PEAK AT TIME = 0.100626 SECONDS

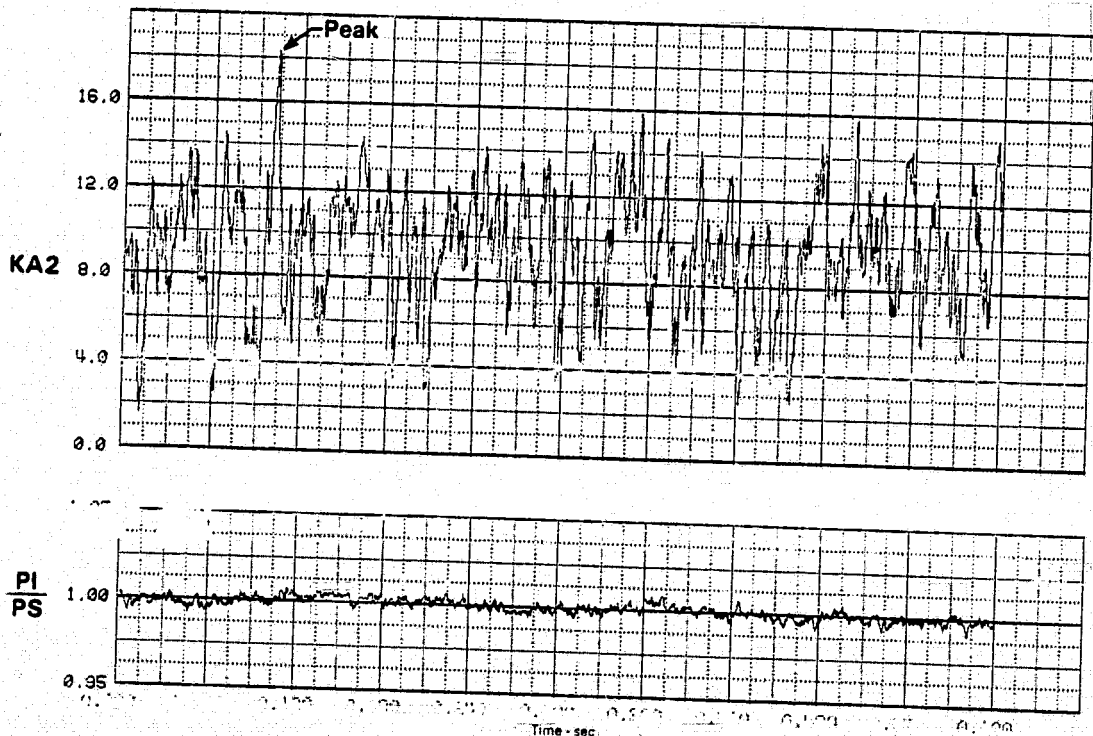
FIGURE G-65 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.5\%$

FSE - NASA DATA STUDY

DATA PART/POINT 543 / 4 IDENT. 65
THE SEGMENT START TIME WAS AT 23:12: 7.089

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02226 (34.5)	WAT2 60.5%	CIVV -25.0
P1 55.63 (8.069)	P1/PS 0.997	KTHETA 0.292	KRA2 0.626	BKRA2 17.996	KA2 18.279	KC2 0.327	KQSP 0.262
							O2 0.083

65(r) Time History Plots 500 Hz



PEAK AT TIME = 0.102709 SECONDS

FIGURE G-65 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.5 %

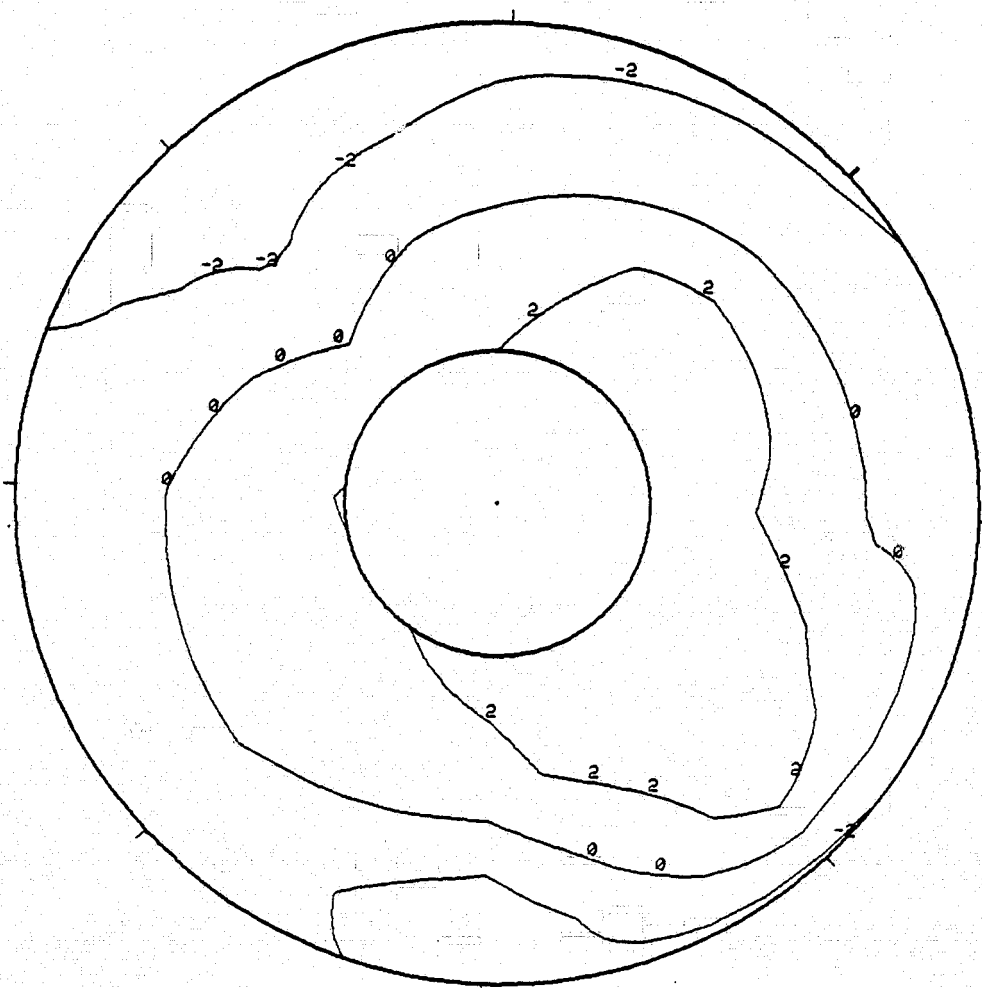
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FSE - NASA DATA STUDY

DATA PART/POINT 543 / 4 IDENT. 85
THE SEGMENT START TIME WAS AT 23:12: 7.092

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02226 (34.5)	WAT2 60.5%	CIVV -25.0
P1 55.74 (8.084)	P1/PS 0.999	KTHETA 0.258	KRA2 0.461	BKRA2 13.258	KA2 13.516	KC2 0.273	KOSP 0.289
							D2 0.070

**65(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz**



MEAN FACE PRESSURE = 55.74 kPa (8.084 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.106036 SECONDS

FIGURE G-65 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, $WAT2 = 60.5\%$

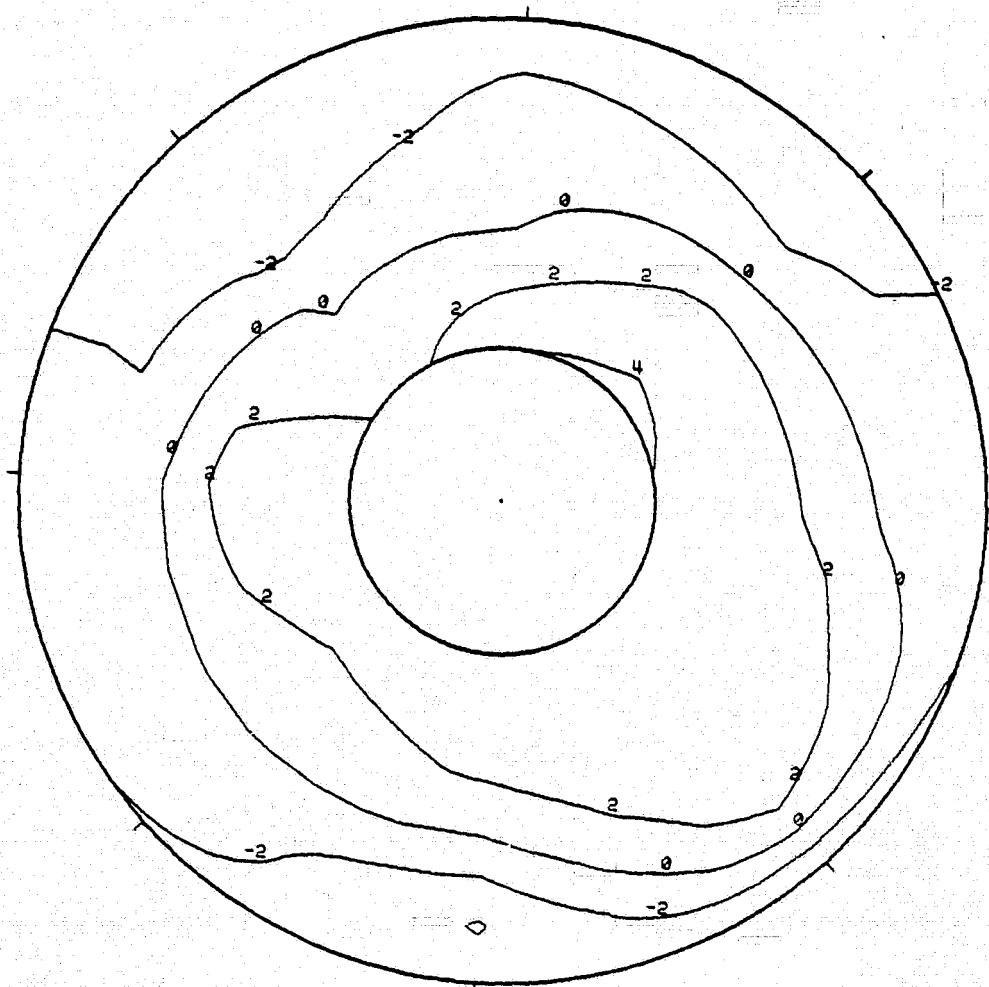
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FSE - NASA DATA STUDY

DATA PART/POINT 543 / 4 IDENT. 88
THE SEGMENT START TIME WAS AT 23:12: 7.991

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02228 (34.5)	WAT2 60.5%	CIVV -25.0
P1 55.72 (8.081)	P1/PS 0.999	KTHETA 0.243	KRA2 0.549	BKRA2 15.778	KQ2 16.021	KC2 0.313	KOSP 0.271
							O2 0.081

65(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz



MEAN FACE PRESSURE = 55.72 kPa (8.081 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.101708 SECONDS

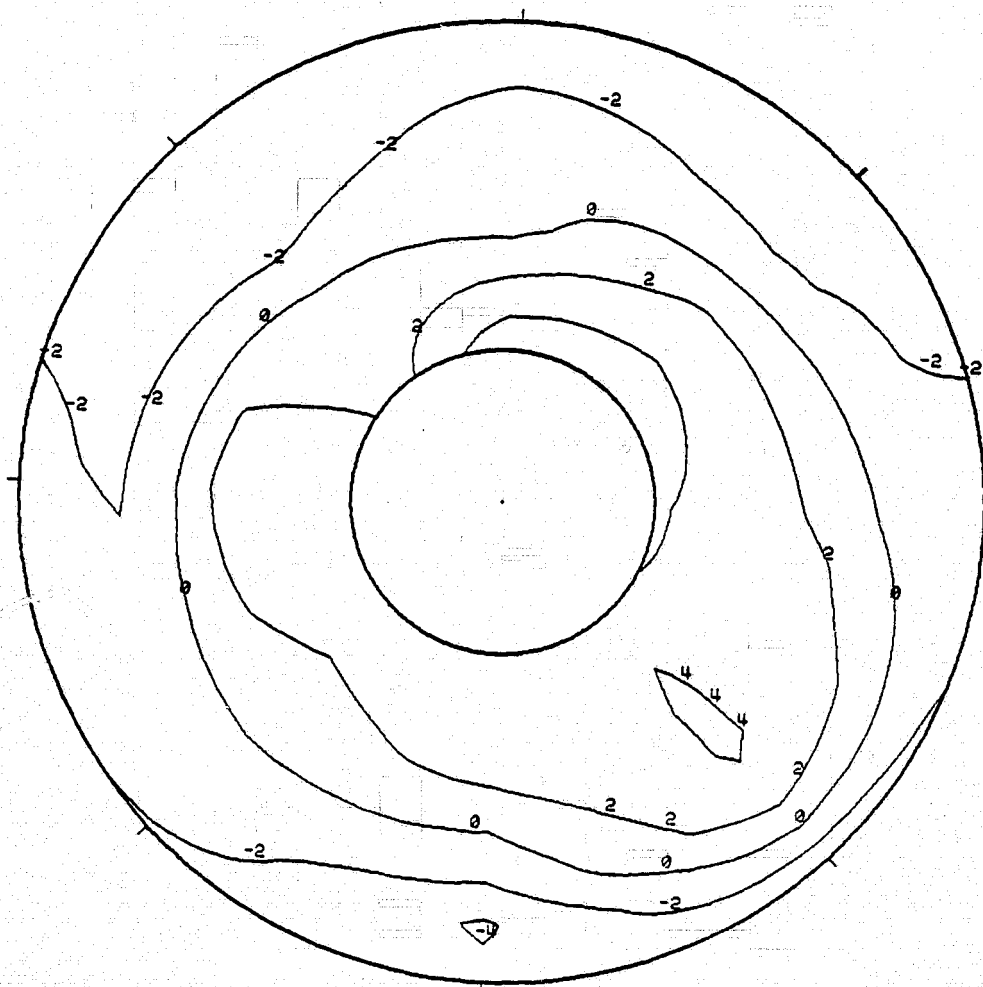
FIGURE G-65 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.5 %

FSE - NASA DATA STUDY

DATA PART/POINT 543 / 4 IDENT. 65
THE SEGMENT START TIME WAS AT 23:12: 7.092

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02226 (34.5)	WAT2 60.5%	CIVV -25.0
P1 55.66 (8.073)	P1/PS 0.998	KTHETA 0.255	KRA2 0.584	BKRA2 16.790	KA2 17.045	KC2 0.272	KOSP 0.279
							D2 0.085

65(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 55.66 kPa (8.073 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.100626 SECONDS

FIGURE G-65 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.5 %

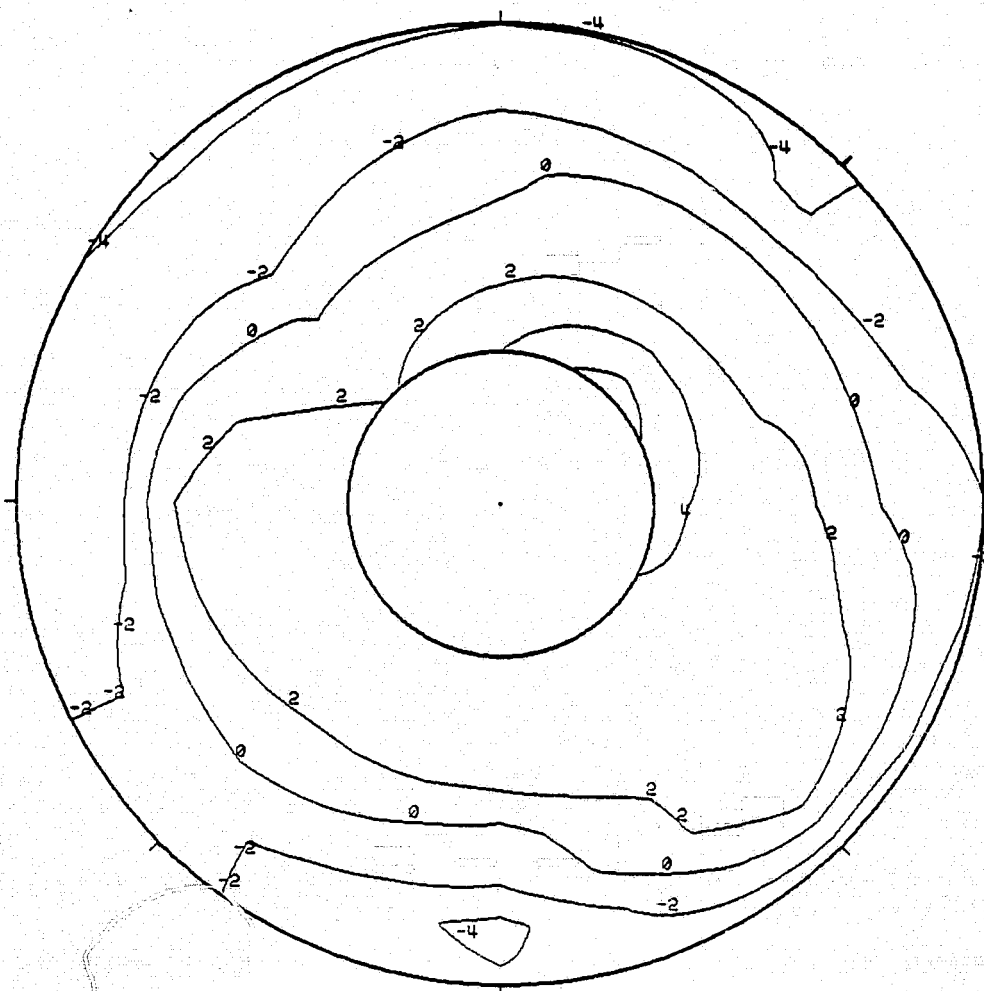
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FSE - NASA DATA STUDY

DATA PART/POINT 543 / 4 IDENT. 66
THE SEGMENT START TIME WAS AT 23:12: 7.089

MACH 2.2	ALPHA -2	BETA 0	RHO -4.0	DELTA3 24.8	BYPASS 0.02226 (34.5)	WAT2 60.5%	CIVV -25.0
P1 55.63 (8.069)	P1/PS 0.997	KTHETA 0.282	KRA2 0.626	BKRA2 17.996	KA2 18.279	KC2 0.327	KOSP 0.262
							D2 0.093

65(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz



MEAN FACE PRESSURE = 55.63 kPa (8.069 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.102709 SECONDS

FIGURE G-65 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = -2.0$, $\beta = 0.0$, WAT2 = 60.5 %

SERIES VIII - NASA Data Study
 Part/Point - 184/7, Ident 66
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00

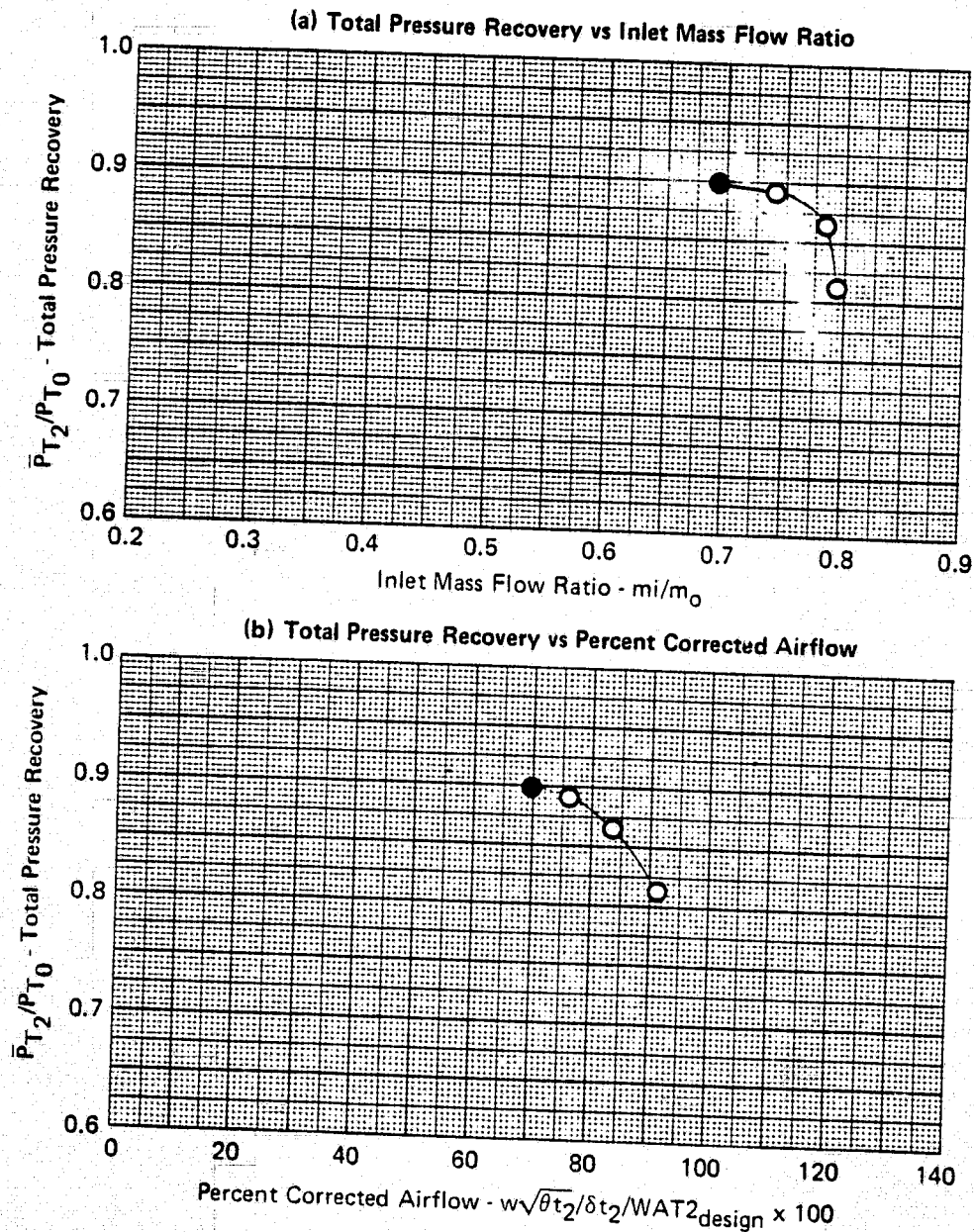


FIGURE G-66
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 69.3\%$

GP77-0658-1

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SERIES VIII - NASA Data Study
 Part/Point - 184/7, Ident 66
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00

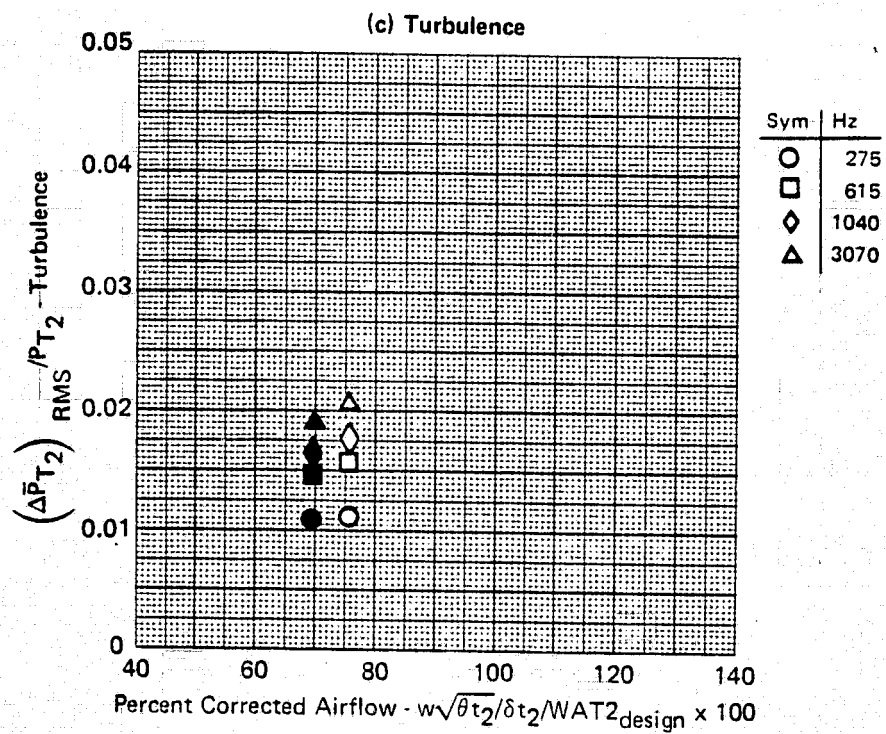


FIGURE G-66 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 69.3\%$

SERIES VIII - NASA Data Study

Part/Point - 184/7, Ident 66

RHO DELTA3 BYPASS CIVV
-2.0 22.5 0.0 -25.00

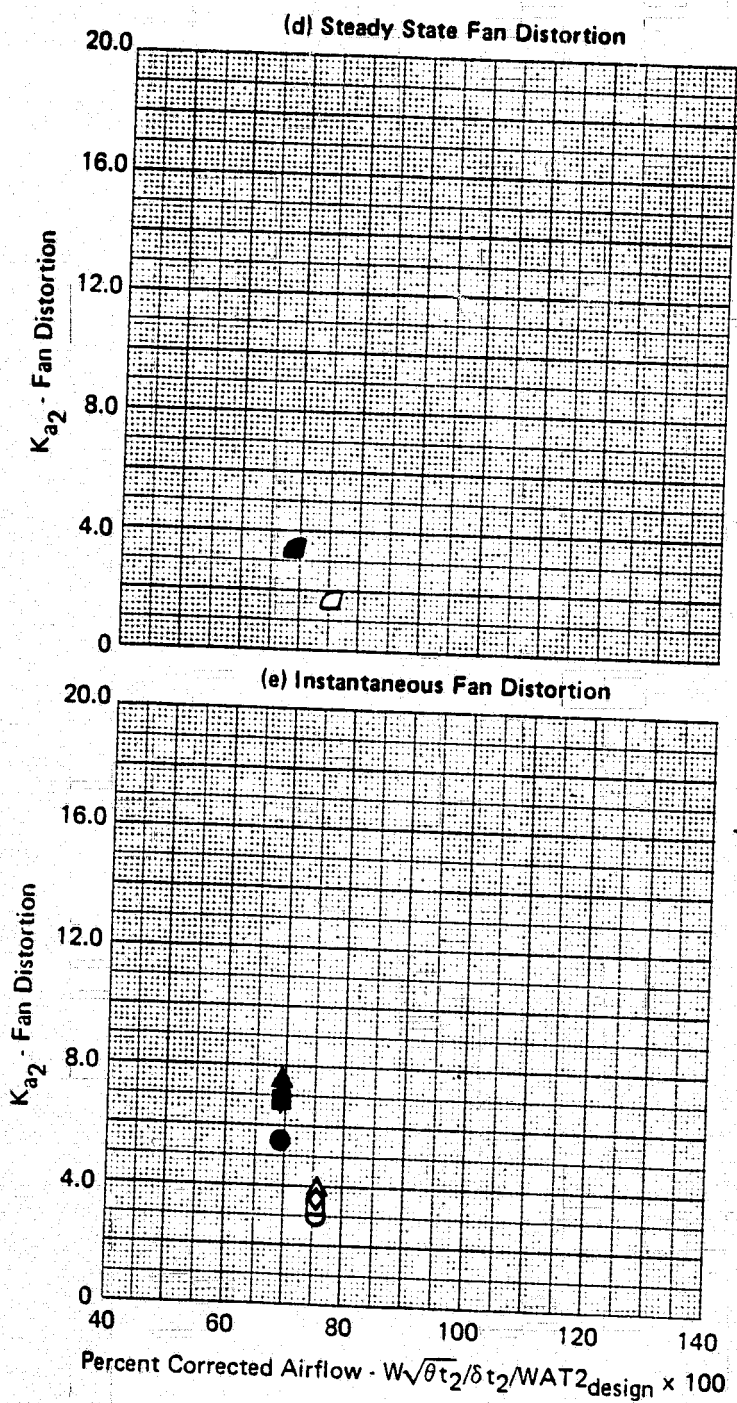
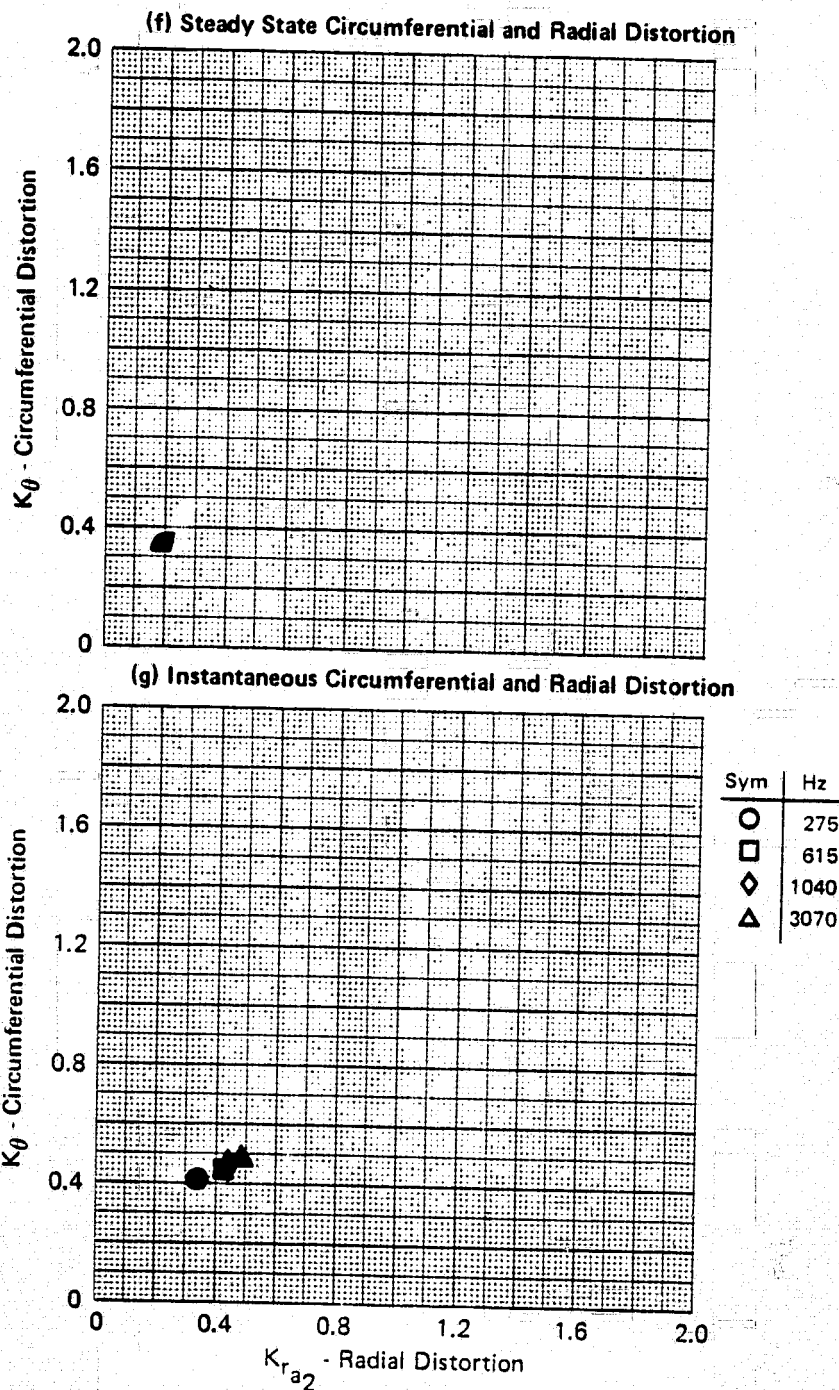


FIGURE G-66 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 69.3\%$

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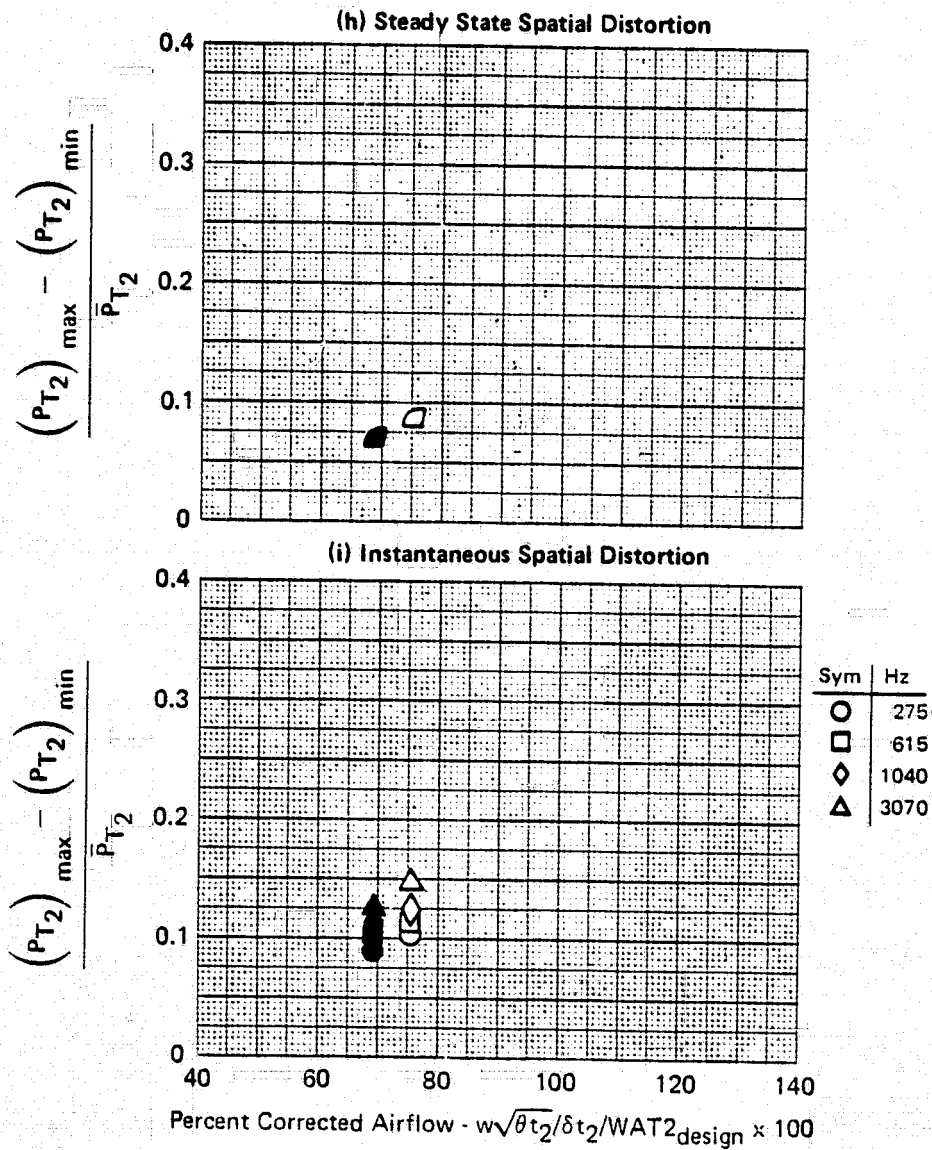
SERIES VIII - NASA Data Study
 Part/Point - 184/7, Ident 66
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00



GP77-0658-2

FIGURE G-66 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 69.3 %

SERIES VIII - NASA Data Study
 Part/Point - 184/7, Ident 66
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00



GP77-0658-4

FIGURE G-66 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 69.3\%$

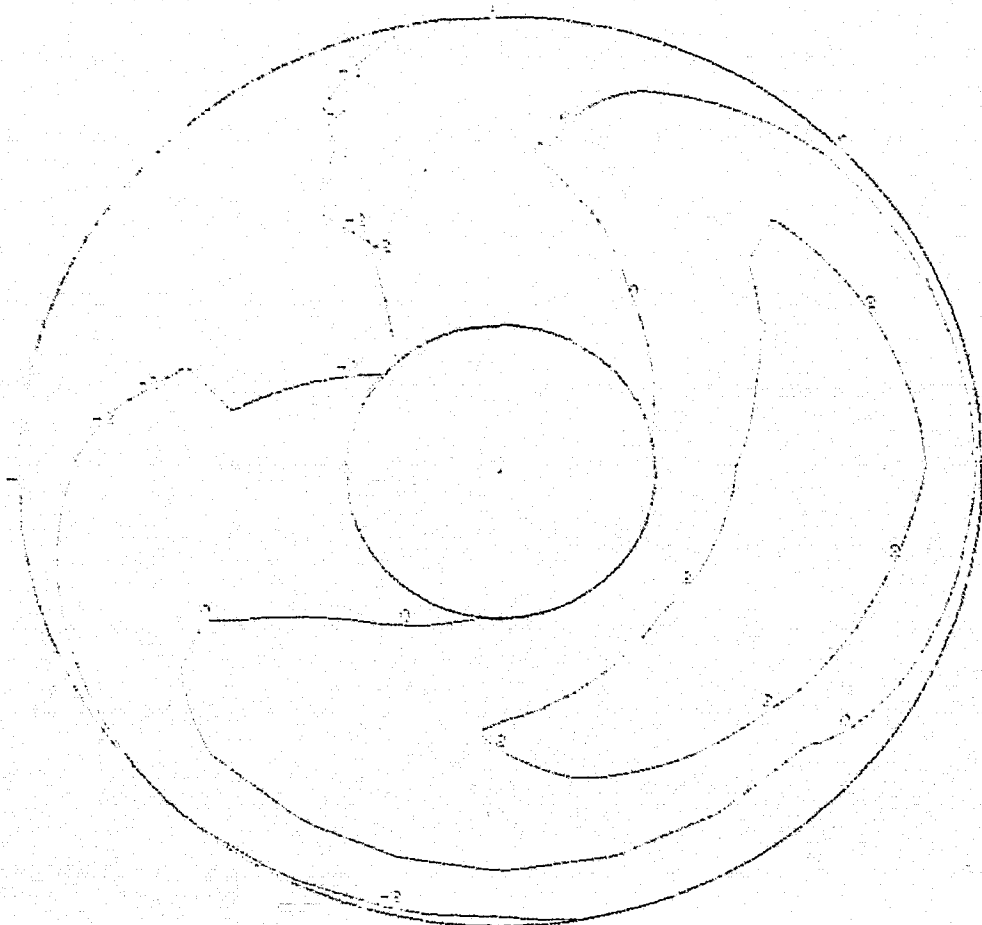
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STEADY STATE TOTAL PRESSURE CONTOUR

DATA SOURCE: MEASUREMENTS. 66
 THE FOLLOWING DATA WERE USED IN THE ANALYSIS:

MEAN	MIN	MAX	STDEV	COEFF	WAT2	WAT1	WAT3
42.32 (6.138)	41.13	43.51	1.19	0.003	69.3%	0.00	0.00

66 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 42.32 kPa (6.138 PSIA)
 NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
 FROM MEAN FACE PRESSURE.

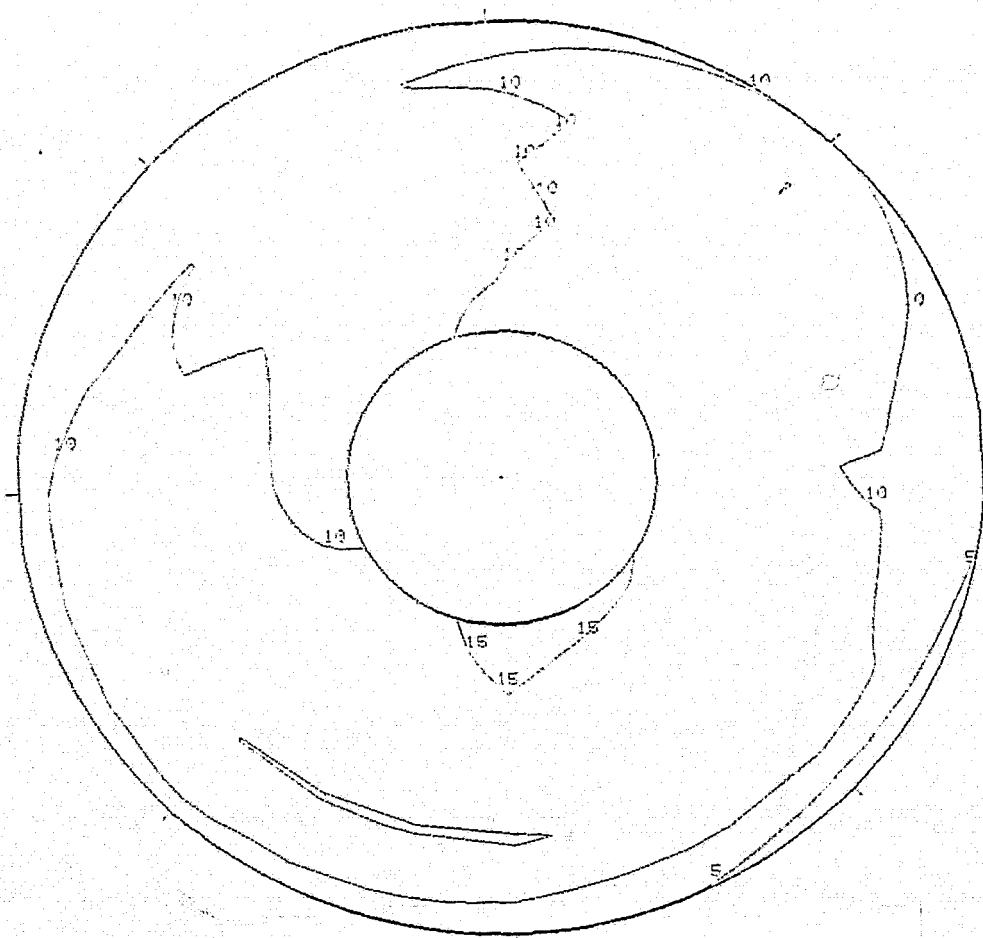
FIGURE G-66 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 69.3 %

GEPIUS VILL - MOPR DATA STUDY

DATA POINT POINT 104.7 IDENT. 66
THE SEGMENT START TIME WAS AT 20:22:10.451

MOCH 2.2 BLOWN 3 DATA 3.2 SELLTOS 10.1 BUREOF 10.1 WAT2 69.3% CIVV -25.9

66(k) Turbulence Contour 275 Hz

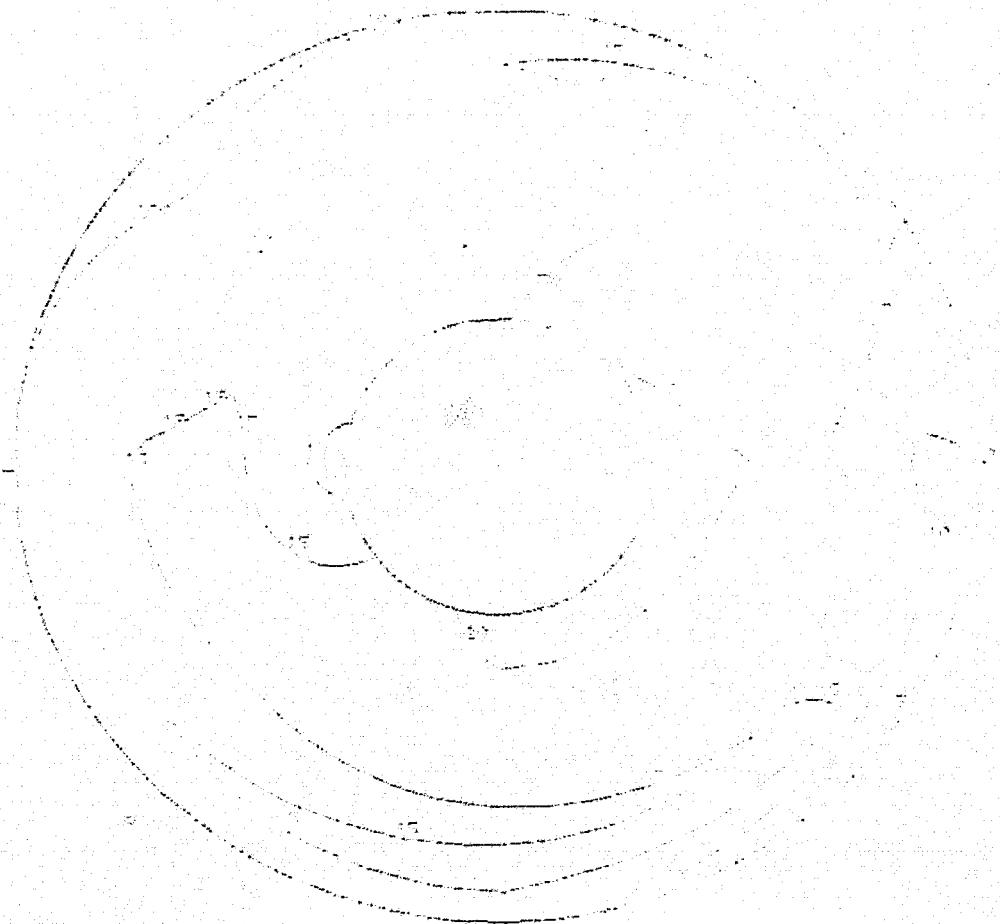


NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01081
FIGURE G-66 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 69.3 %

66

69.3%

**66(I) Turbulence Contour
615 Hz**



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01474
FIGURE G-66 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 69.3 %

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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 7 IDENT. 66
THE SEGMENT START TIME WAS AT 20:22:12.051

MACH
2.2

ALPHA
0

BETA
0

RHO
-3.0

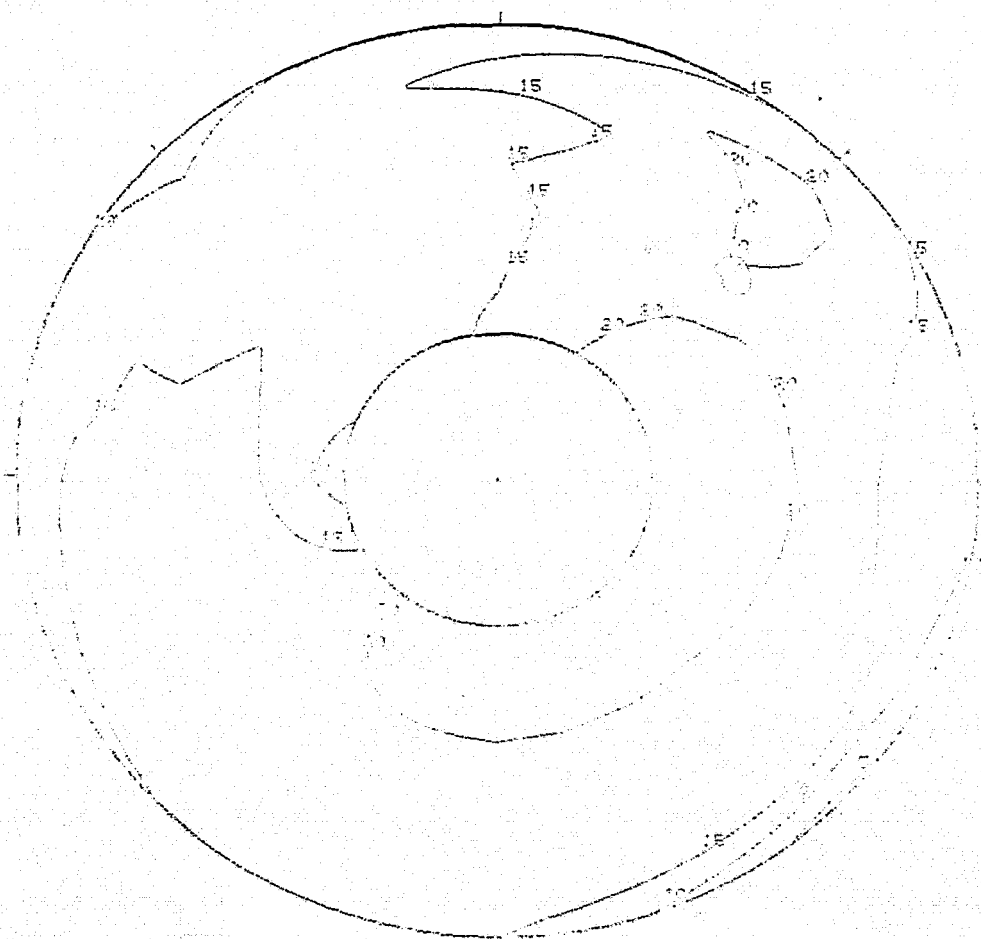
DELTA3
32.5

BYPASS
0.0

WAT2
69.3%

CIVV
-25.0

66(m) Turbulence Contour 1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01643

FIGURE G-66 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

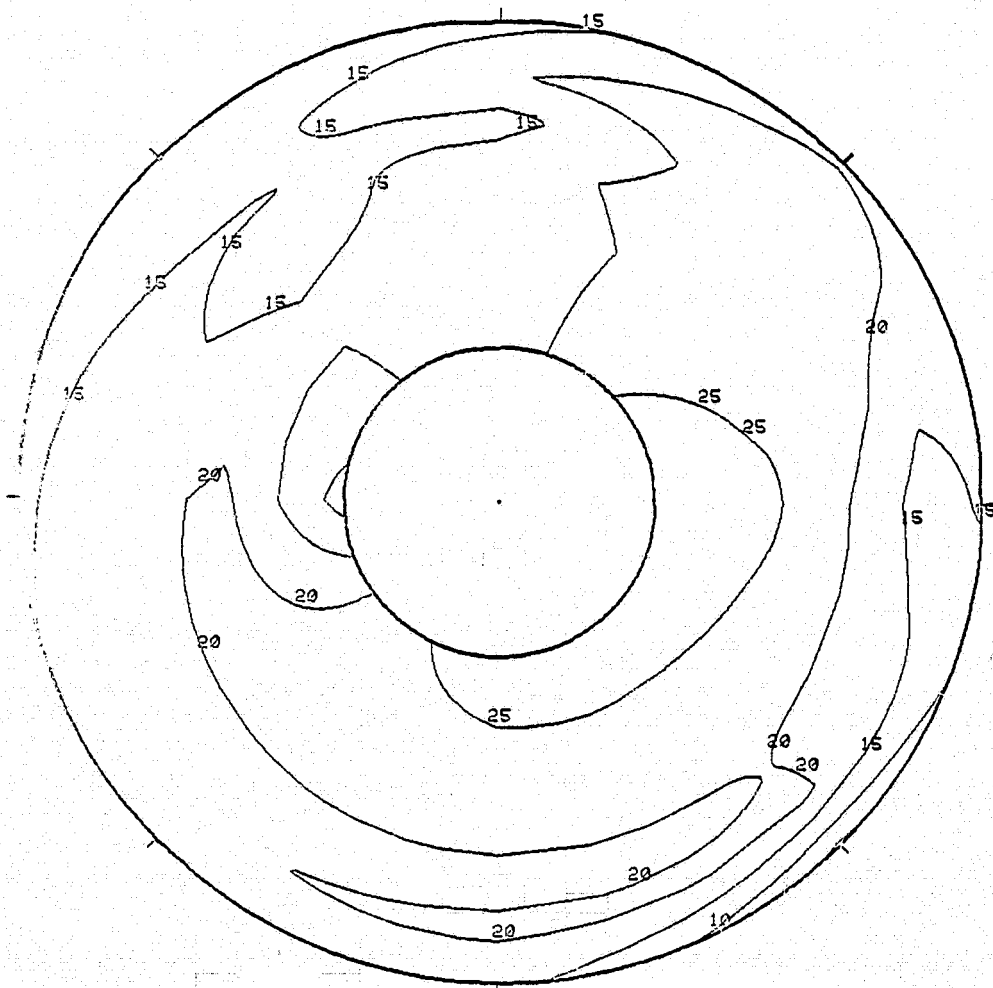
$M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 69.3\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 7 IDENT. 66
THE SEGMENT START TIME WAS AT 20:22:12.051

NOON	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
0.0	0.0	0.0	-2.0	22.5	0.0	69.3%	-25.0

66(n) Turbulence Contour 3070 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01901

FIGURE G-66 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 69.3\%$

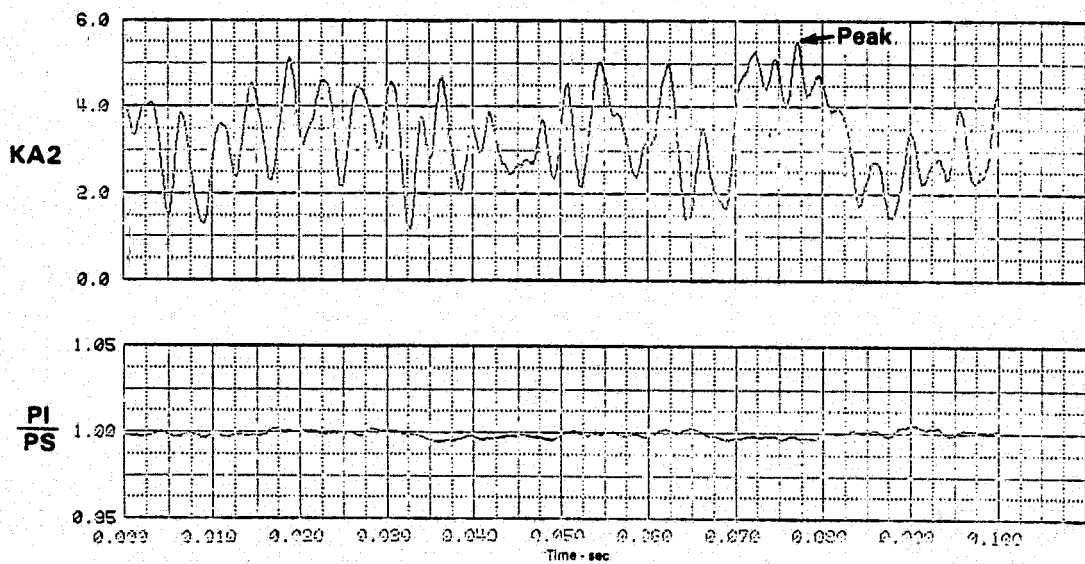
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 7 IDENT. 66
THE SEGMENT START TIME WAS AT 20:22:12.051

MOCH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA2 22.5	BYPASS 0.0	WAT2 69.3%	CIVV -25.0
P1 42.20 (6.120)	P1/P3 0.997	KTHETA 0.418	KRA2 0.937	EkRA2 5.939	KAS 5.596	KOS 0.545	KOSP 0.491
							OS 0.000

66(o) Time History Plots
275 Hz



PEAK AT TIME = 0.077055 SECONDS

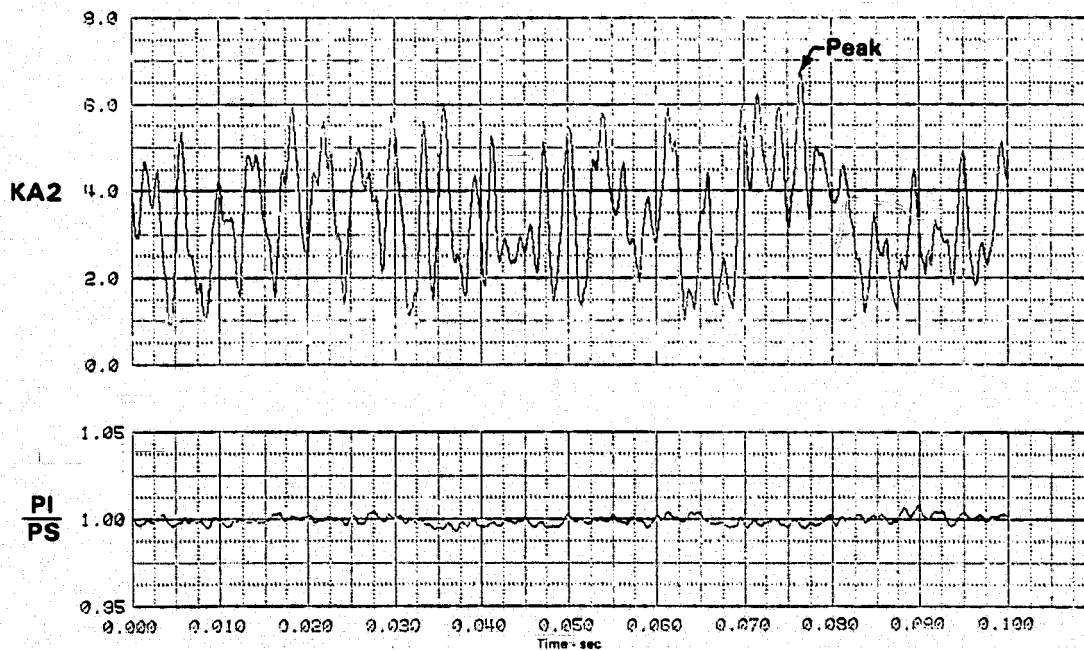
FIGURE G-66 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 69.3 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 7 IDENT. 66
THE SEGMENT START TIME WAS AT 20:22:12.050

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 69.3%	CIVV -25.0
P1 42.13 (0.110)	P1/P3 0.735	KTHETA 0.454	KPA2 0.417	RKPA2 6.174	PA2 6.758	KC2 0.538	KOSP 0.526
							D2 0.105

66(p) Time History Plots 615 Hz



PEAK AT TIME = 0.076560 SECONDS

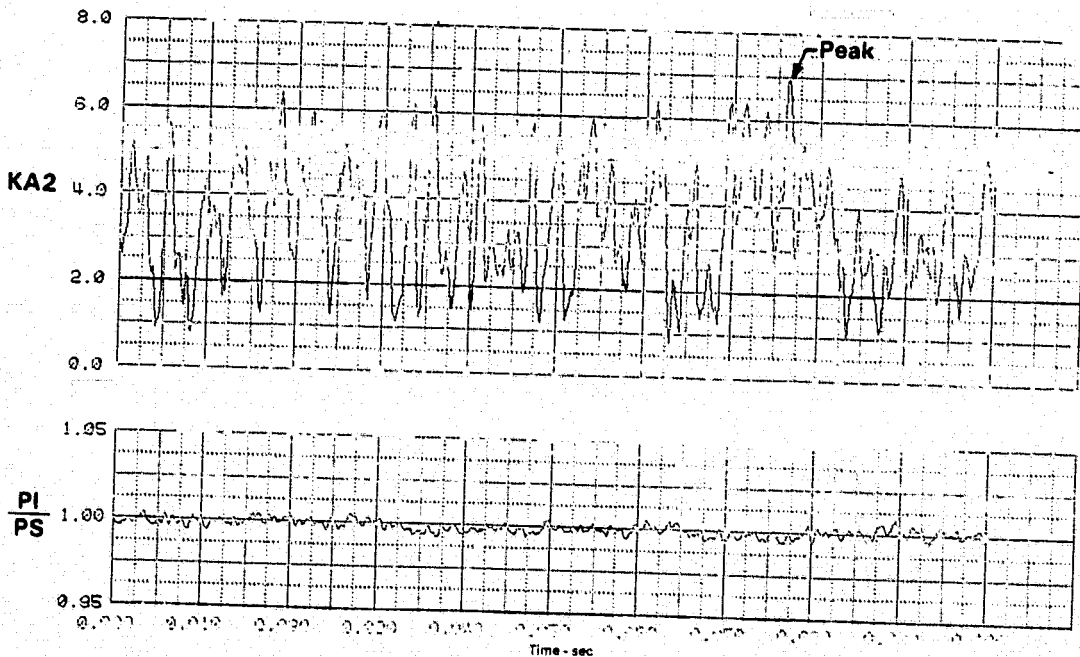
FIGURE G-66 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 69.3 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 7 IDENT. 66
THE SEGMENT START TIME WAS AT 20:22:12.051

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA2 22.5	BYPASS 0.0	WAT2 69.3%	CLVV -25.0
PI 42.09 (6.106)	PI/PS 0.995	KTHETA 0.057	KPA2 0.423	PI/PO2 0.476	KW2 6.952	PO2 0.952	PO2 0.953
							DS 0.108

66(q) Time History Plots
1040 Hz



PEAK AT TIME = 0.076230 SECONDS

FIGURE G-66 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 69.3 %

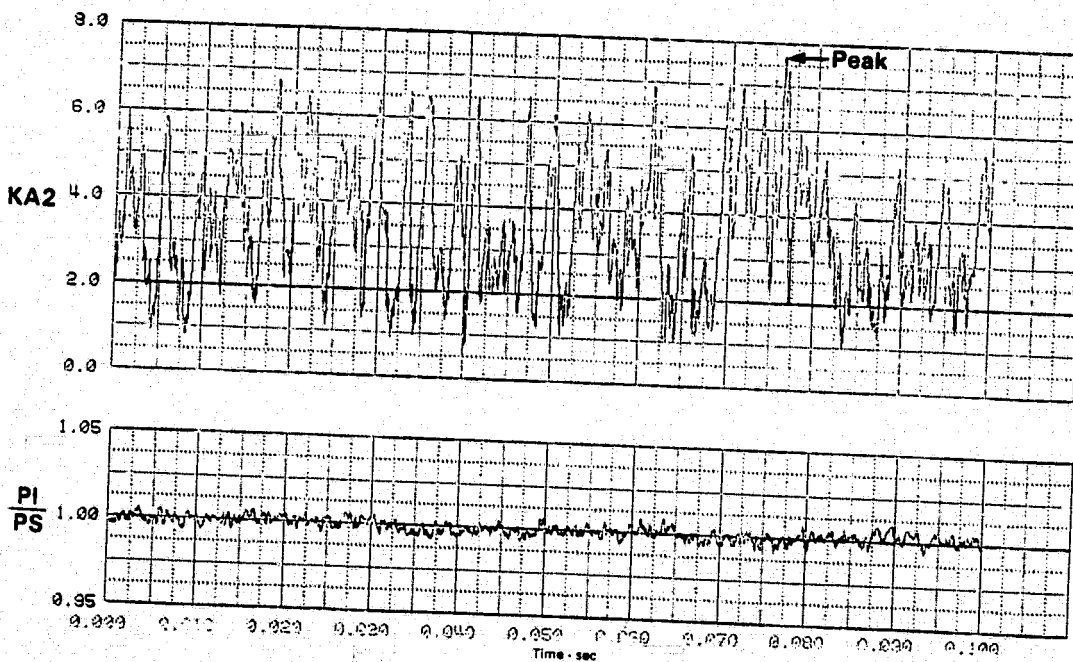
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 7 IDENT. 66
THE SEGMENT START TIME WAS AT 20:22:12.051

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DEL T23 22.5	BYPASS 0.0	WAT2 69.3%	CIVV -25.0
PI 42.32 (6.138)	PI/PS 1.000	KTHETA 0.477	KRA2 0.476	EKRA2 7.292	KA2 7.679	KC2 0.581	KOSP 0.612
							D2 0.125

66(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.076050 SECONDS

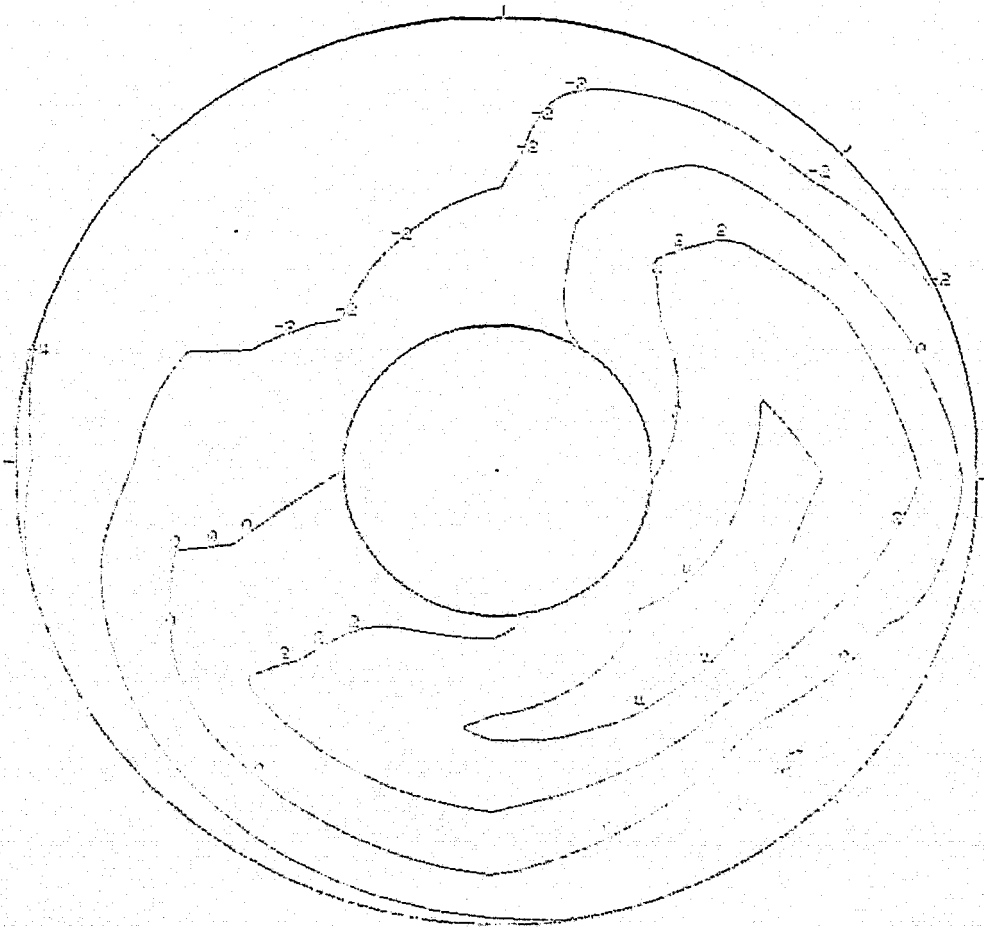
FIGURE G-66 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 69.3 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 7 IDENT. 66
THE SEGMENT START TIME WAS AT 20:22:12.951

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 69.3%	QIVV -25.2
PI 42.20 (6.120)	PI/PS 0.997	KTHETA 0.416	KRA2 0.997	EKRA2 5.093	KQ2 5.506	KQ2 0.505	KQSP 0.491
							D2 0.090

**66(a) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
275 Hz**



MEAN FACE PRESSURE = 42.20 kPa (6.120 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.077055 SECONDS

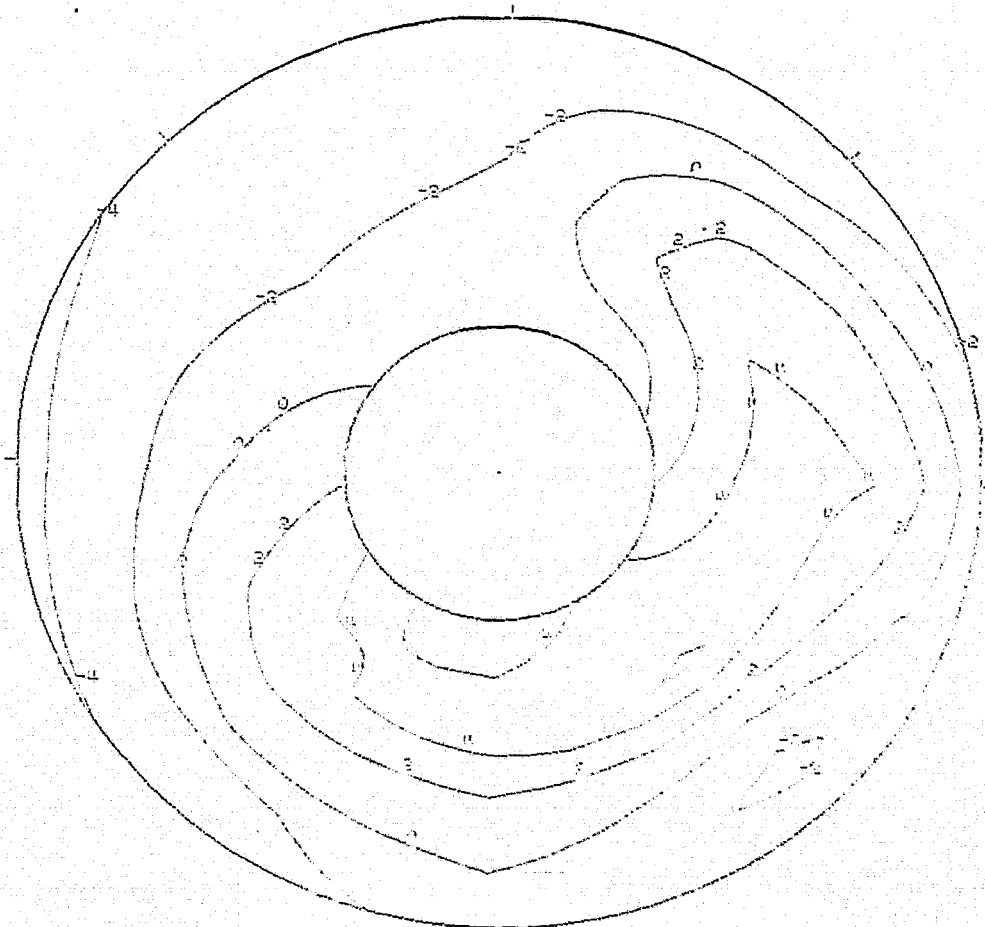
FIGURE G-66 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 69.3\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 7 IDENT. 66
THE SEGMENT START TIME WAS AT 20:22:12.050

MOCH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA2 22.0	BYPASS 0.0	WAT2 69.3%	C1VV -25.0
DT 42.13 (6.110)	P1/P2 0.935	KTHETA 0.434	KPA2 0.417	BKPA2 6.104	KPC 6.753	KCC 0.533	KOSP 0.526
							OS 0.135

66(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
615 Hz



MEAN FACE PRESSURE = 42.13 kPa (6.110 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.076560 SECONDS

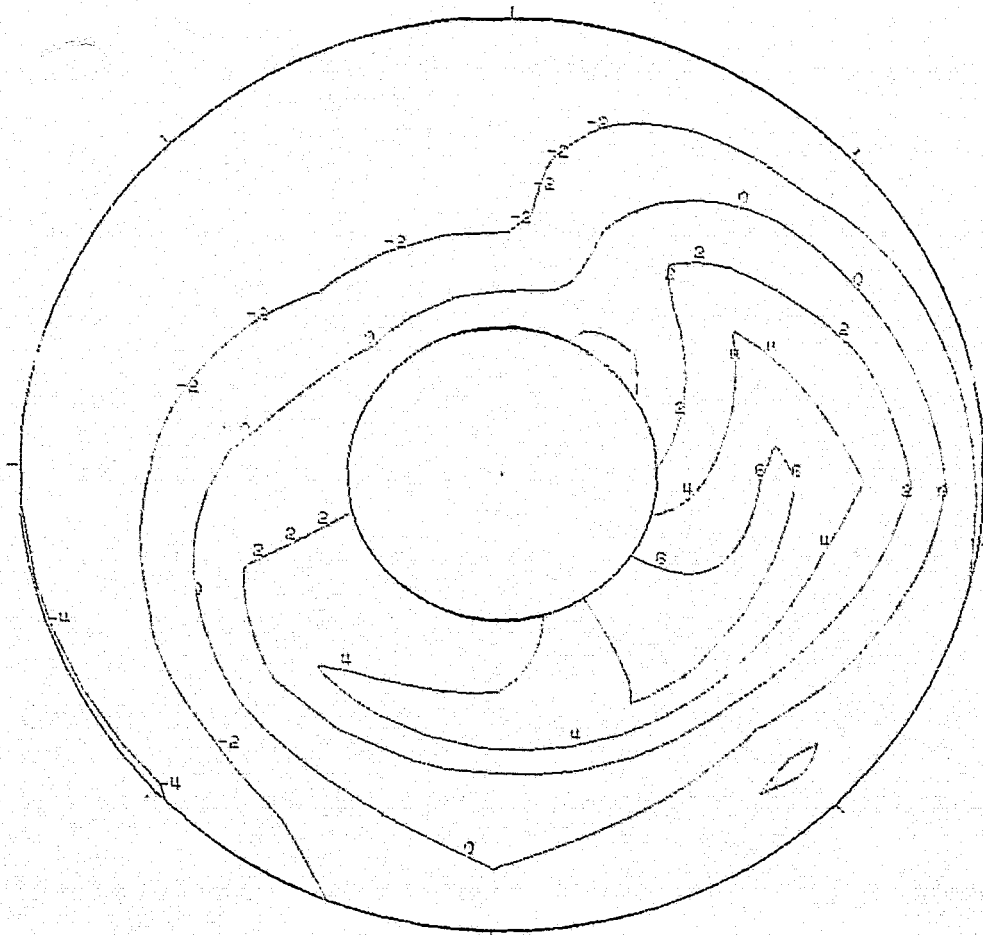
FIGURE G-66 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 69.3 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 7 IDENT. 88
THE SEGMENT START TIME WAS AT 20:22:12.051

MACH 2.2	ALPHA 0	BETA 0	PHO -2.0	DELTA2 22.5	BYPASS 0.0	WAT2 69.3%	CLVV -25.0
⁵¹ 42.09 (6.105)	P1/PS 0.395	KTHETA 0.457	KRA2 0.423	BKRA2 8.475	KAC 8.933	KCC 0.552	KOSP 0.553
							D2 0.108

66(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 1040 Hz



MEAN FACE PRESSURE = 42.09 kPa (6.105 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.076230 SECONDS

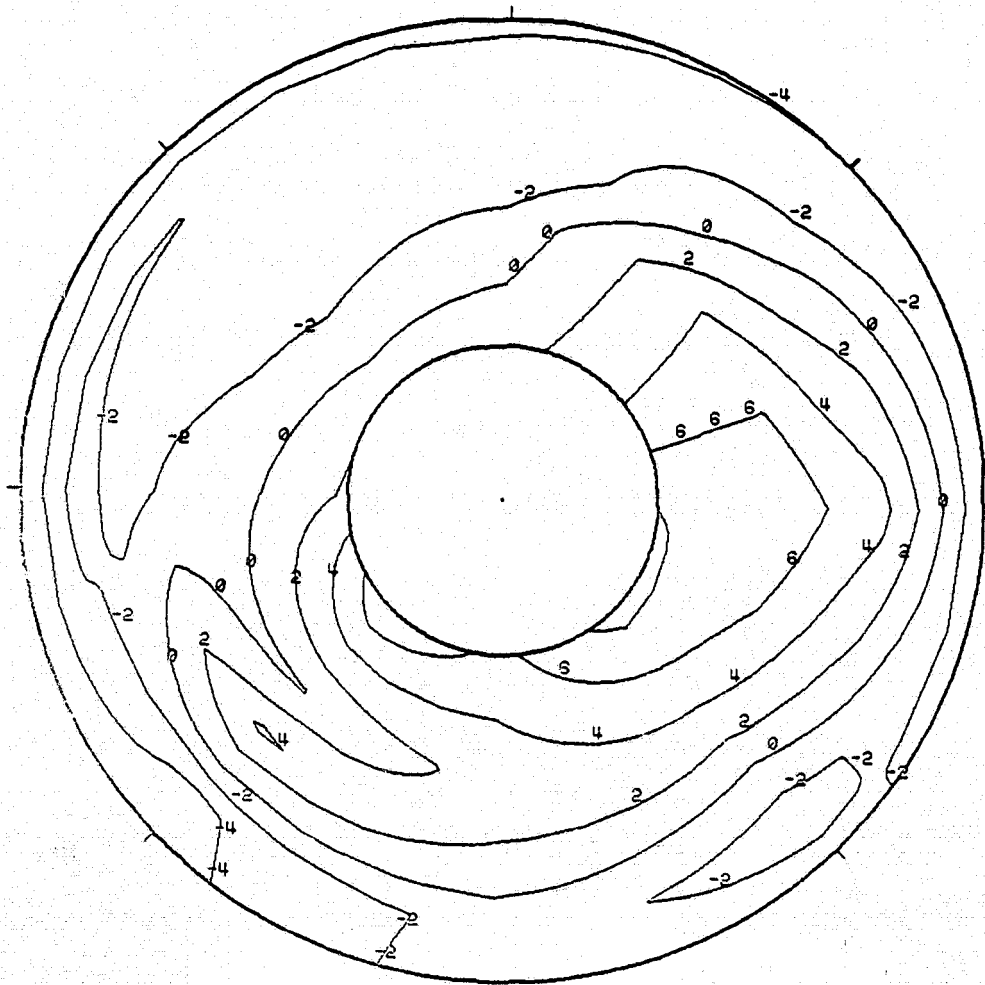
FIGURE G-66 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 69.3\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 7 IDENT. 66
THE SEGMENT START TIME WAS AT 20:22:12.051

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 69.3%	CIVV -25.0
PI 42.32 (6.138)	PI/PS 1.000	KTHETA 0.477	KRA2 0.476	BKRA2 7.202	KA2 7.679	KC2 0.581	KOSP 0.612
							D2 0.125

66(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
3070 Hz



MEAN FACE PRESSURE = 42.32 kPa (6.138 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.076050 SECONDS

FIGURE G-66 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 69.3 %

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SERIES VIII - NASA Data Study
 Part/Point - 184/5, Ident 67
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00

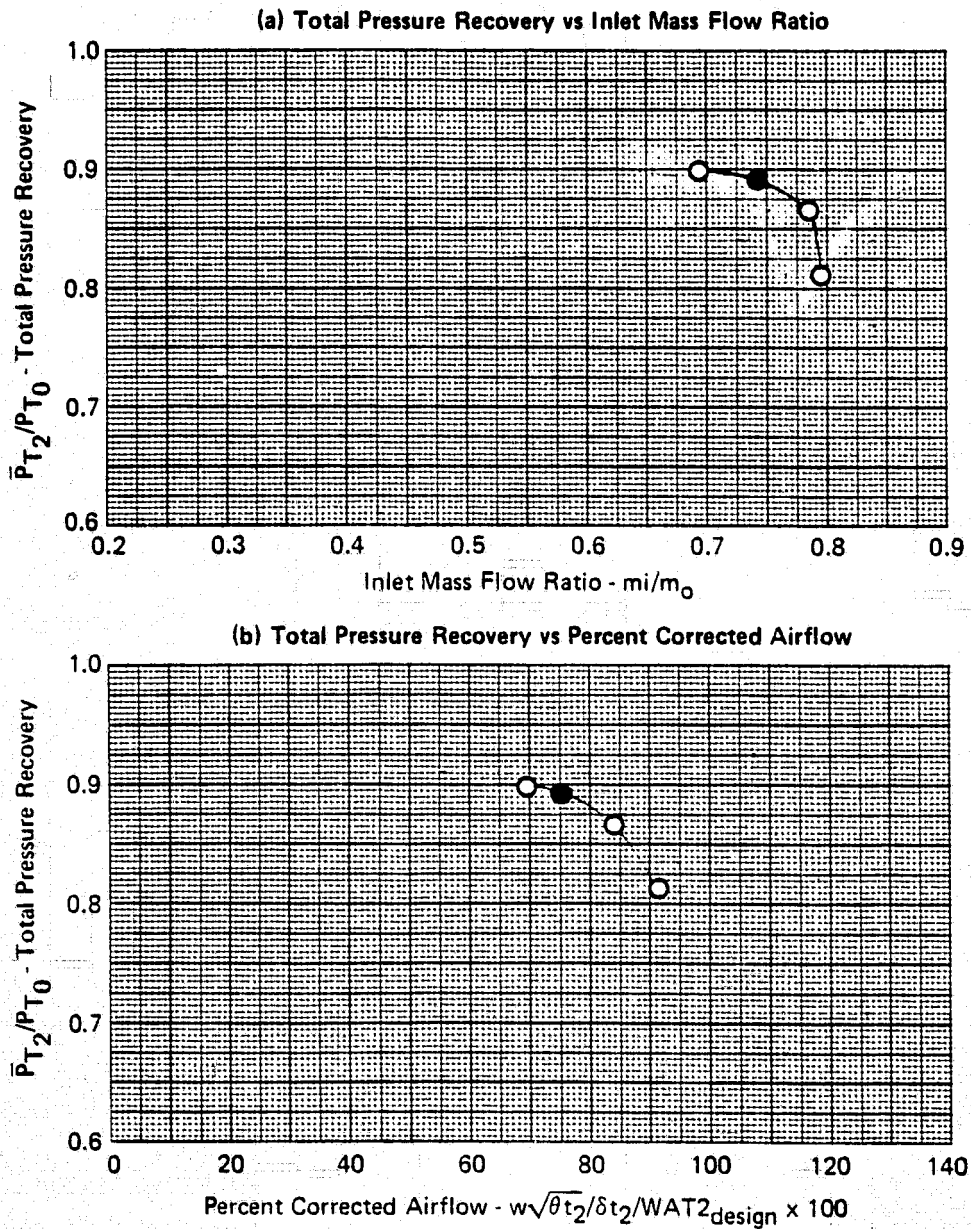
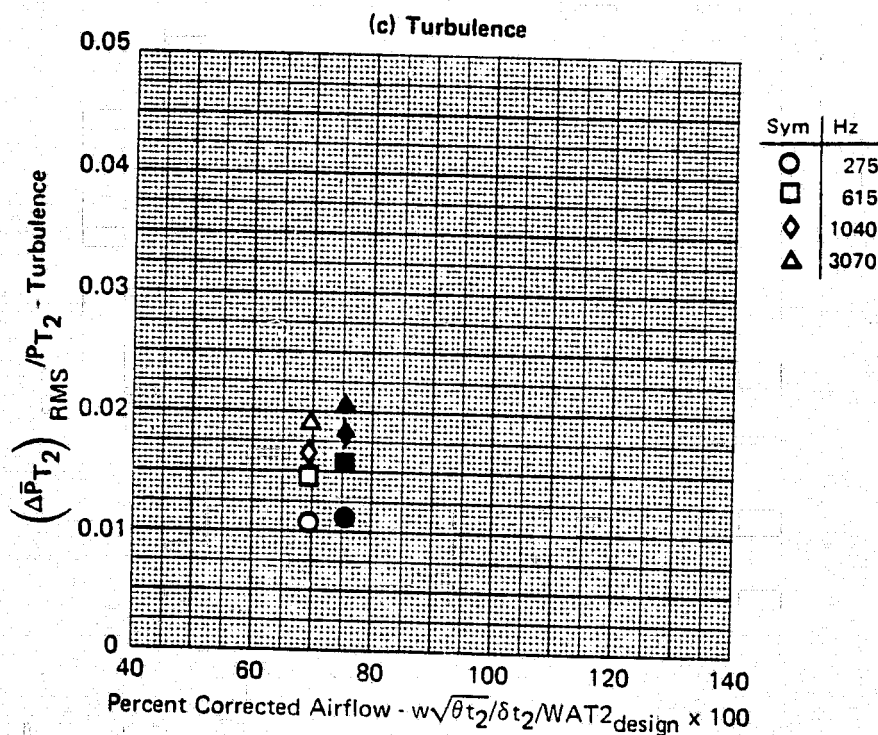


FIGURE G-67
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 75.4\%$

GP77-0858-1

SERIES VIII - NASA Data Study
 Part/Point - 184/5, Ident 67
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00



GP77-0658-5

FIGURE G-67 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 75.4\%$

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SERIES VIII - NASA Data Study
 Part/Point - 184/5, Ident 67
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00

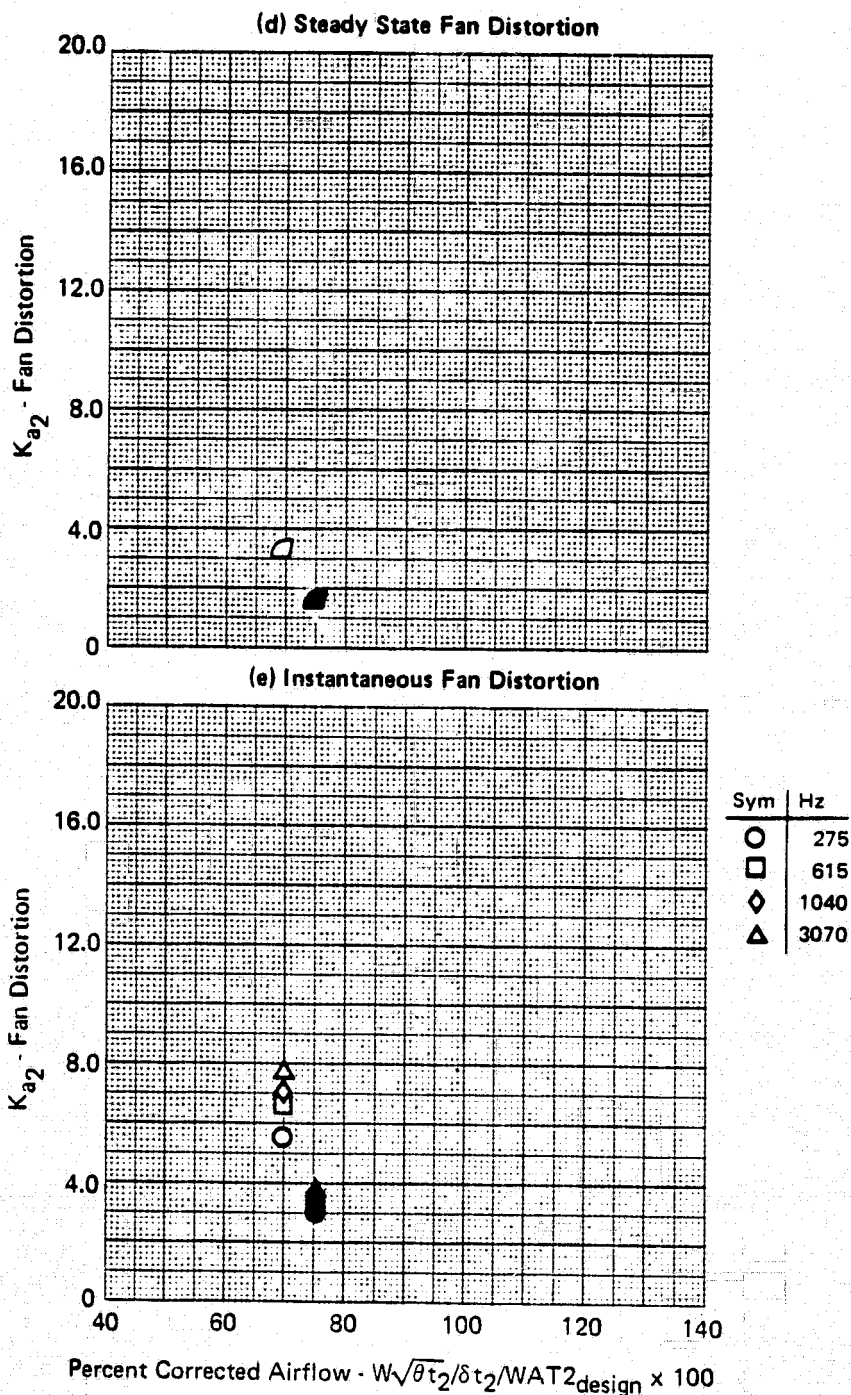


FIGURE G-67 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 75.4\%$

SERIES VIII - NASA Data Study
 Part/Point - 184/5, Ident 67
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00

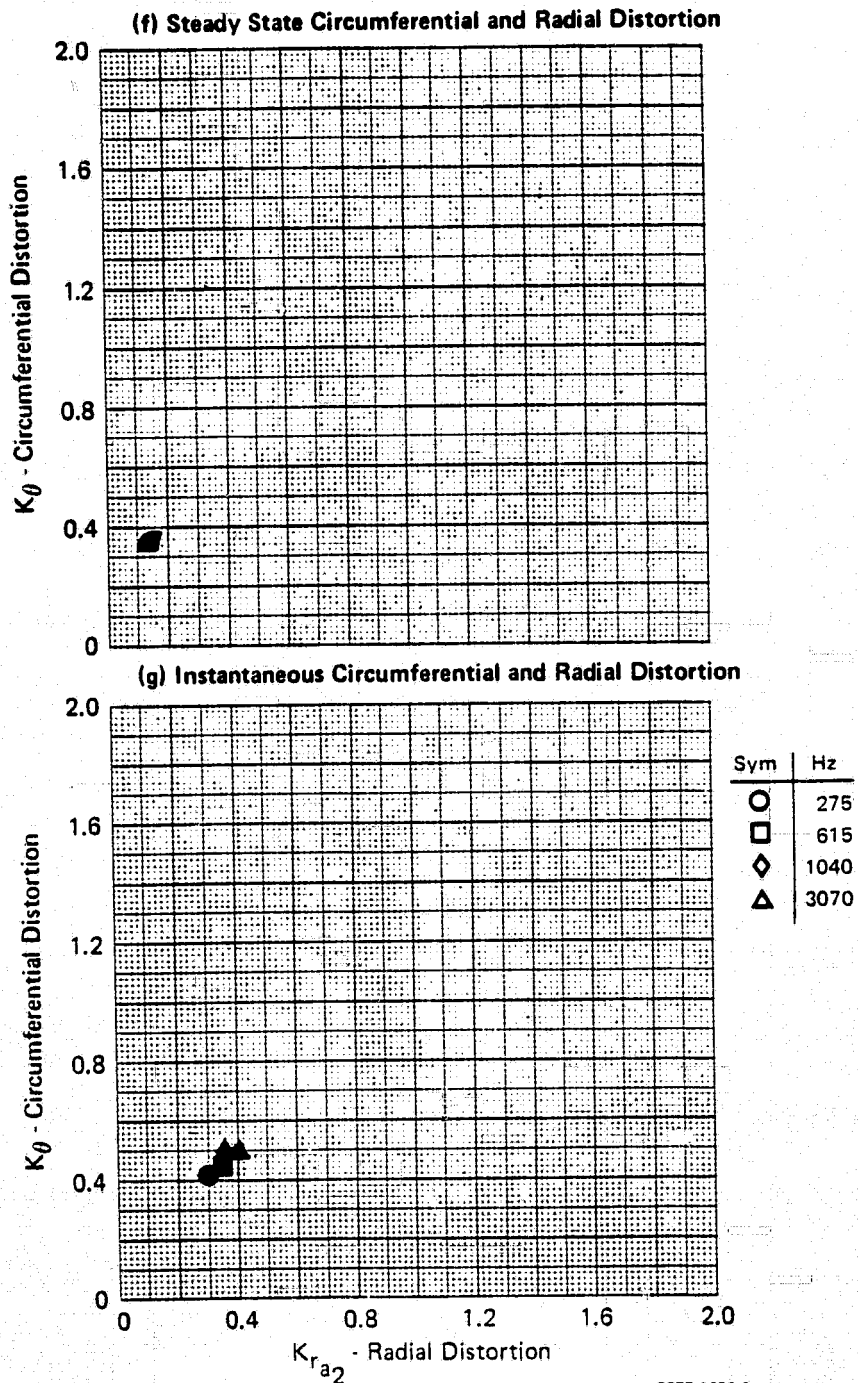
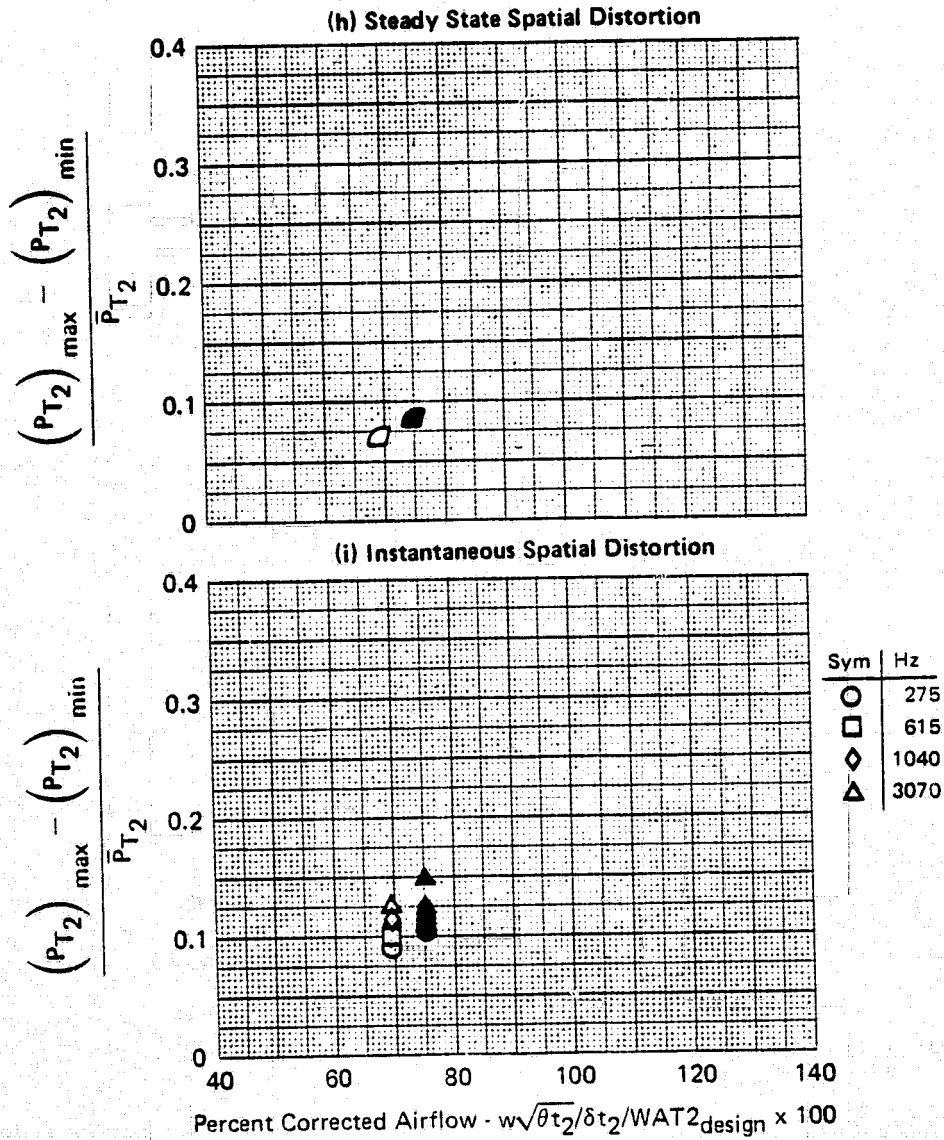


FIGURE G-67 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 75.4 %

SERIES VIII - NASA Data Study
Part/Point - 184/5, Ident 67

RHO DELTA3 BYPASS CIVV
-2.0 22.5 0.0 -25.00



GP77-0658-4

FIGURE G-67 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 75.4\%$

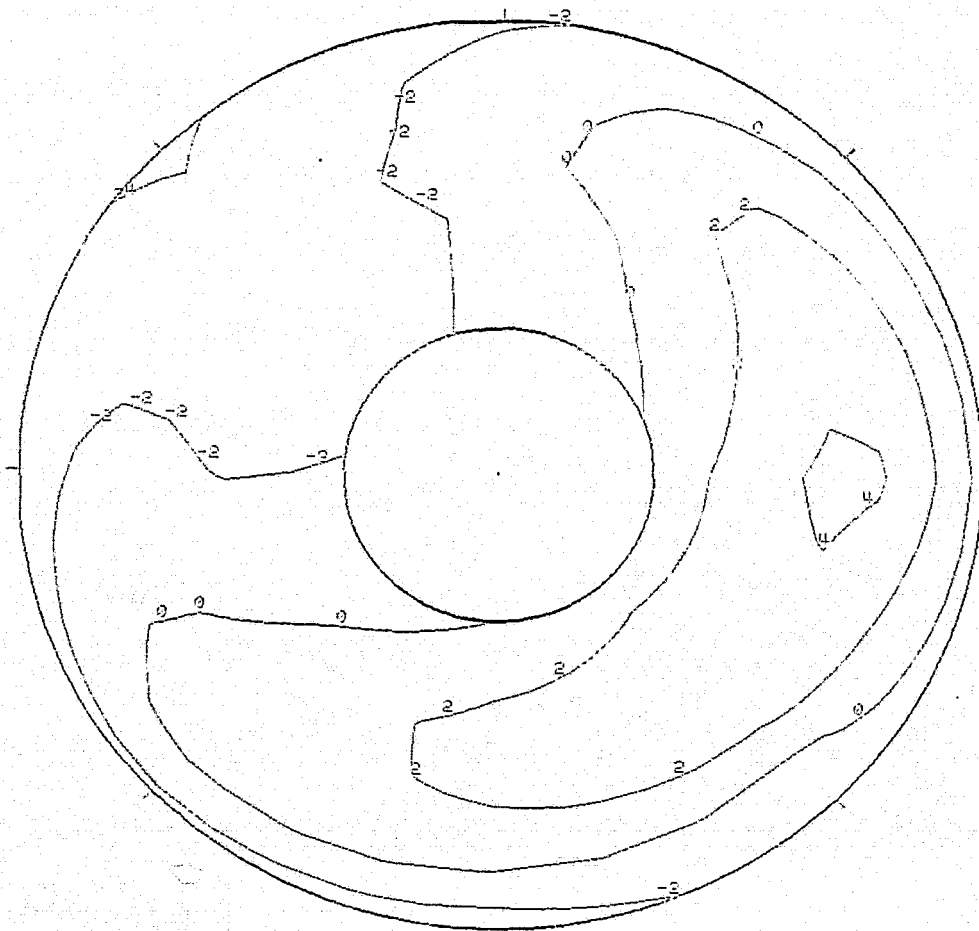
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 5 IDENT. **67**
 THE SEGMENT START TIME WAS AT 20:19:38.051

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA8 22.6	BYPASS 0.0	WAT2 75.4%	CIVV -25.0
42.01 (6.093)	PI/PS 1.000	KTHETA 0.350	KRA2 0.145	SKRA2 1.243	KQ2 1.538	KQ2 0.399	KQSP 0.383
							D2 0.985

67 (J) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 42.01 kPa (6.093 PSIA)
 NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
 FROM MEAN FACE PRESSURE.

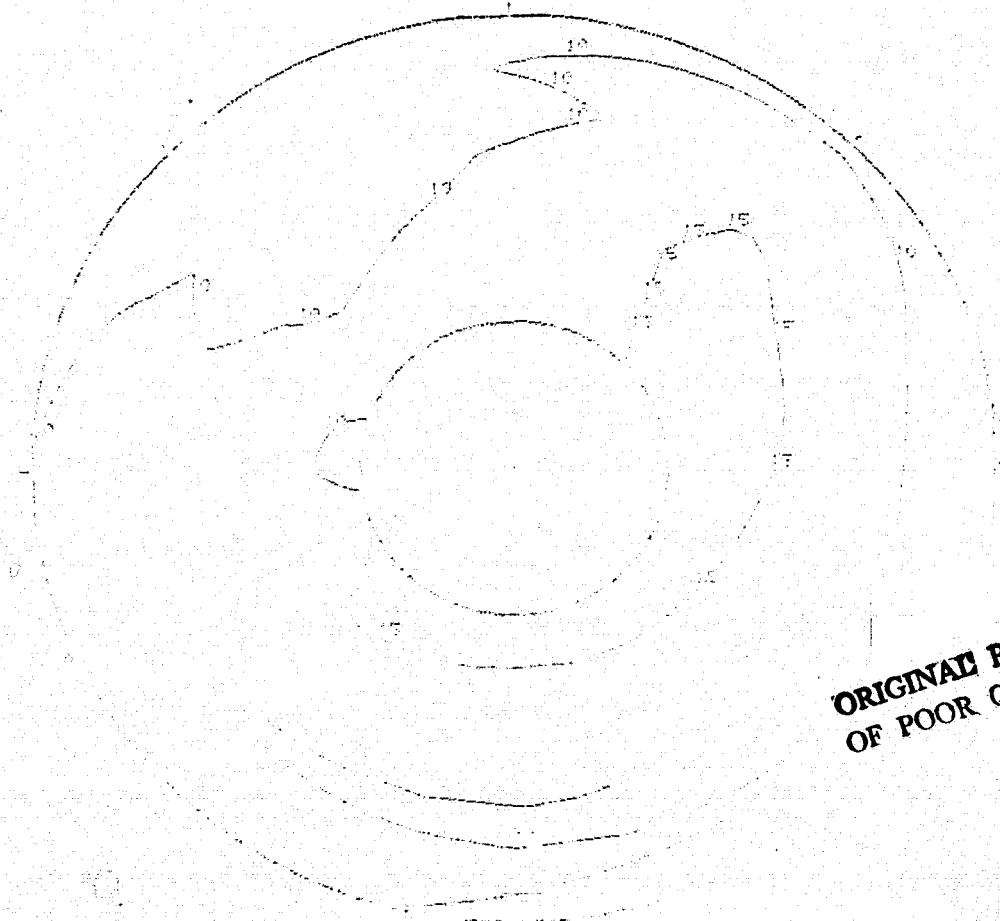
FIGURE G-67 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 75.4 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 104/5 IDENT. **67**
THE SEGMENT START TIME WAS AT 20:19:30.051

MACH	ALPHA	BETA	PHI	DELTA	BYPASS	WAT2	CLV
2.2	0	0	-3.0	22.5	0.0	75.4%	-25.0

67(k) Turbulence Contour 275 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01118
FIGURE G-67 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 75.4 %

SERIES VIII - NASA DATA STUDY

DATA POINT IDENT. 67
THE SEGMENT START TIME WAS AT 20:10:23.044

MOCH	ALPHA	BETA	BHO	DELTA	EURR	WAT2	WATV
2.2	0.0	0.0	0.0	0.0	0.0	75.4%	15.0

67(I) Turbulence Contour 615 Hz



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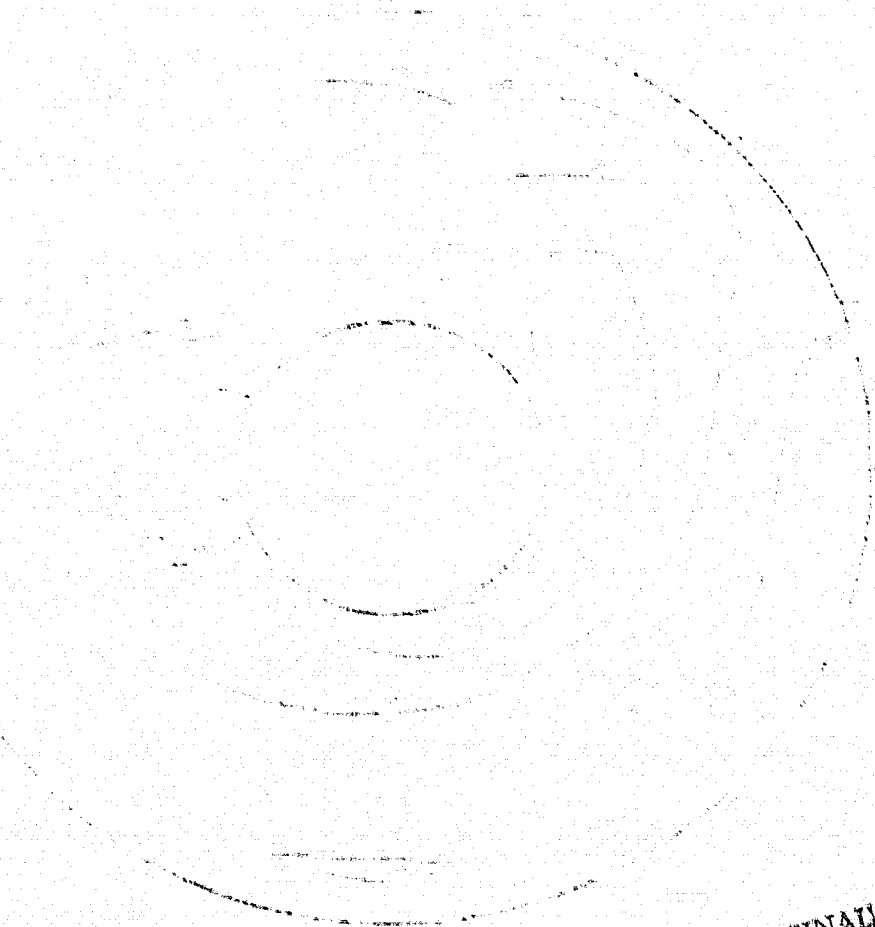
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01578

FIGURE G-67 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

$M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 75.4\%$

**67(m) Turbulence Contour
1040 Hz**



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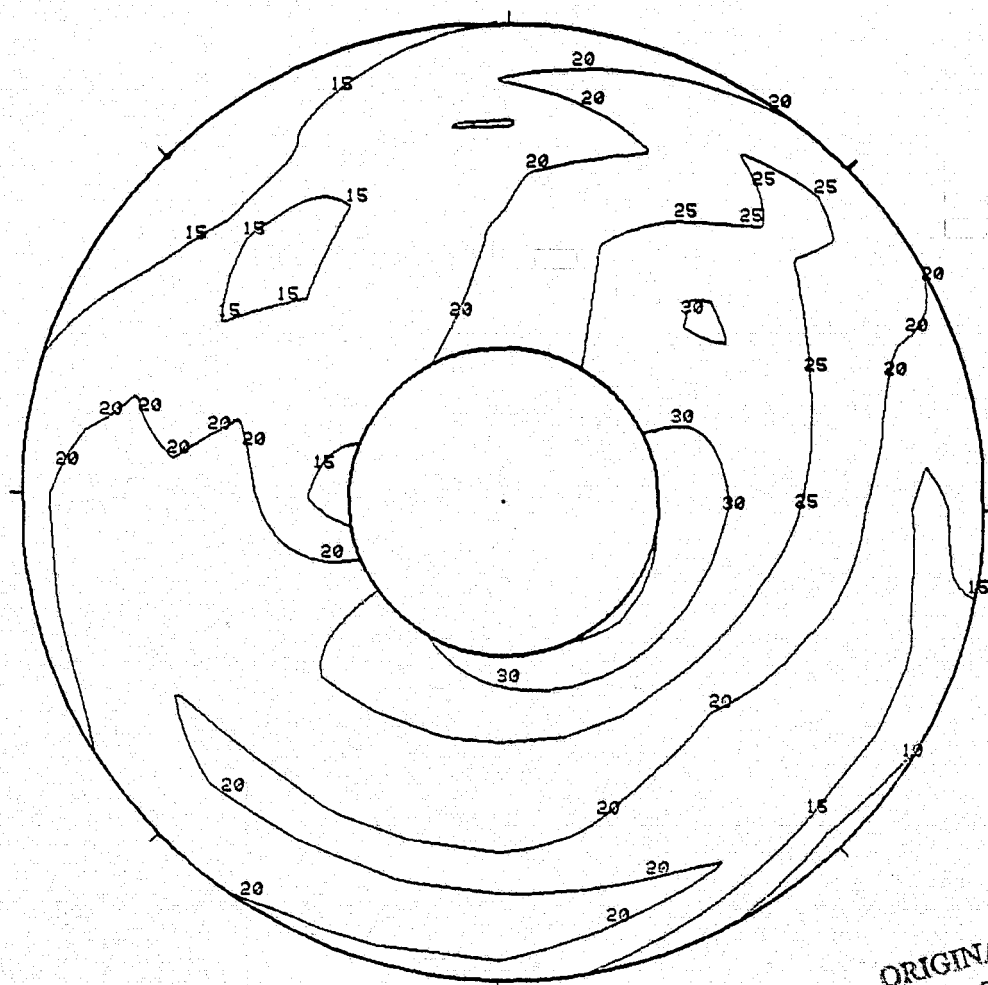
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01781
FIGURE G-67 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 75.4 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 5 IDENT. 67
THE SEGMENT START TIME WAS AT 20:19:38.045

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 75.4%	CIVV -25.0
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67 (n) Turbulence Contour 3070 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02069

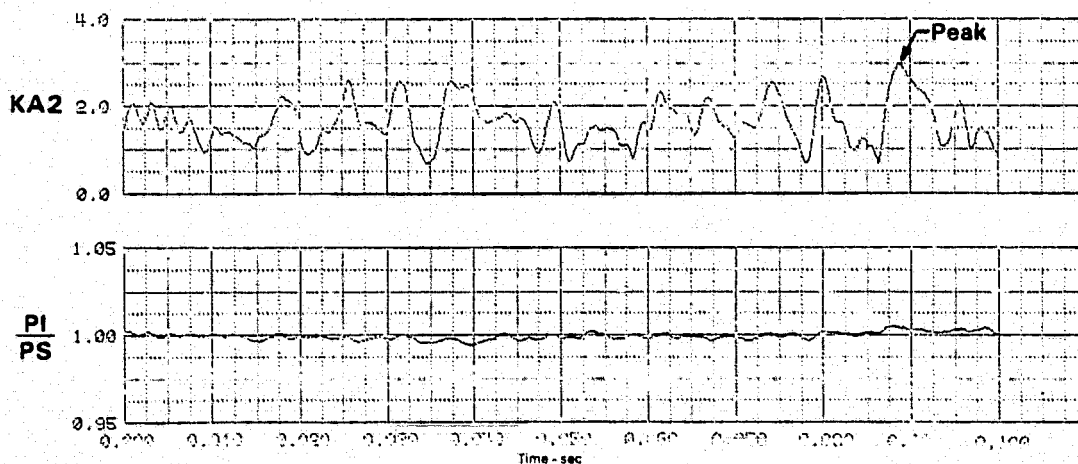
FIGURE G-67 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 75.4 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 5 IDENT. 67
THE SEGMENT START TIME WAS AT 20:19:38.051

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 75.4%	CIVV -25.0
PI 42.19 (6.119)	PI/PS 1.004	KTHETA 0.420	KRA2 0.236	BI:RA2 2.554	KA2 2.974	KC2 0.563	KOSF 0.500
							D2 0.105

67(o) Time History Plots 275 Hz



PEAK AT TIME = 0.088770 SECONDS

FIGURE G-67 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 75.4%

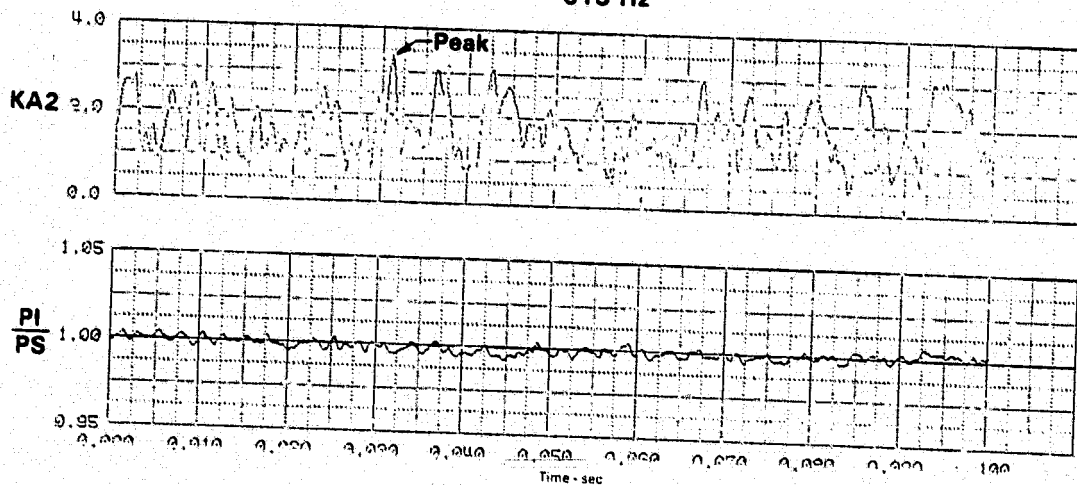
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 5 IDENT. 67
THE SEGMENT START TIME WAS AT 20:19:38.044

MACH 2.2	ALPHA 0	BETA 0	RHO 2.0	DELTA3 22.5	BYPASS 0.0	WAT2 75.4%	Q1VW -25.0
PI 41.99 (6.090)	PI/PS 0.993	KTHETA 0.455	KPA2 0.337	BKPA2 2.407	KAS 3.362	KCS 0.450	KOSP 0.544
							D2 0.116

67(p) Time History Plots
615 Hz



PEAK AT TIME = 0.031185 SECONDS

FIGURE G-67 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 75.4%

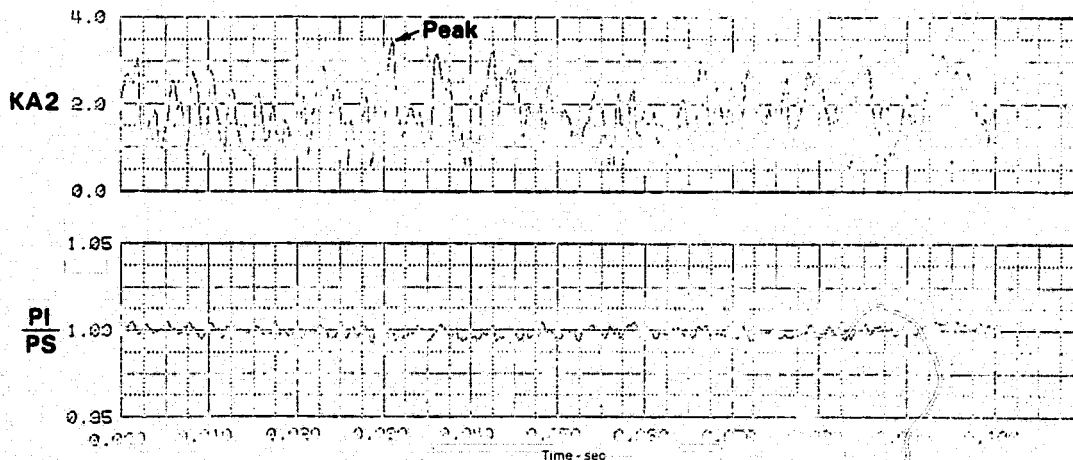
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 5 IDENT. 67
THE SEGMENT START TIME WAS AT 20:10:20.044

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA2 22.6	BYPASS 0.0	WAT2 75.4%	QIVV -25.0
P1 42.01 (6.093)	P1/PS 17.000	KTHETA 0.457	KD02 0.000	DE02 0.000	KD2 3.454	KD2 0.000	DC 0.121

67(q) Time History Plots
1040 Hz



PEAK AT TIME = 0.031020 SECONDS

FIGURE G-67 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2, \alpha = 0.0, \beta = 0.0, WAT2 = 75.4\%$

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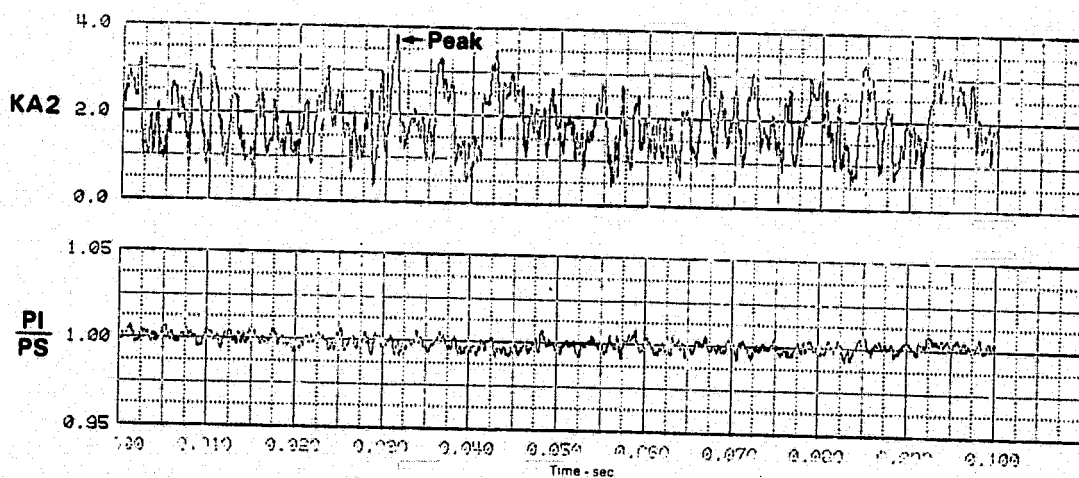
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 134 / 5 IDENT. 67
THE SEGMENT START TIME WAS AT 20:19:38.045

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA23 22.5	BYPASS 0.0	WAT2 75.4%	CIVV -25.0
P1 42.00 (8.092)	PI/PS 1.000	KTHETA 0.434	KRA2 0.367	EKRA2 3.334	KA2 3.817	KC2 0.533	KOSP 0.603
							D2 0.147

67(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.031140 SECONDS

FIGURE G-67 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2, \alpha = 0.0, \beta = 0.0, WAT2 = 75.4\%$

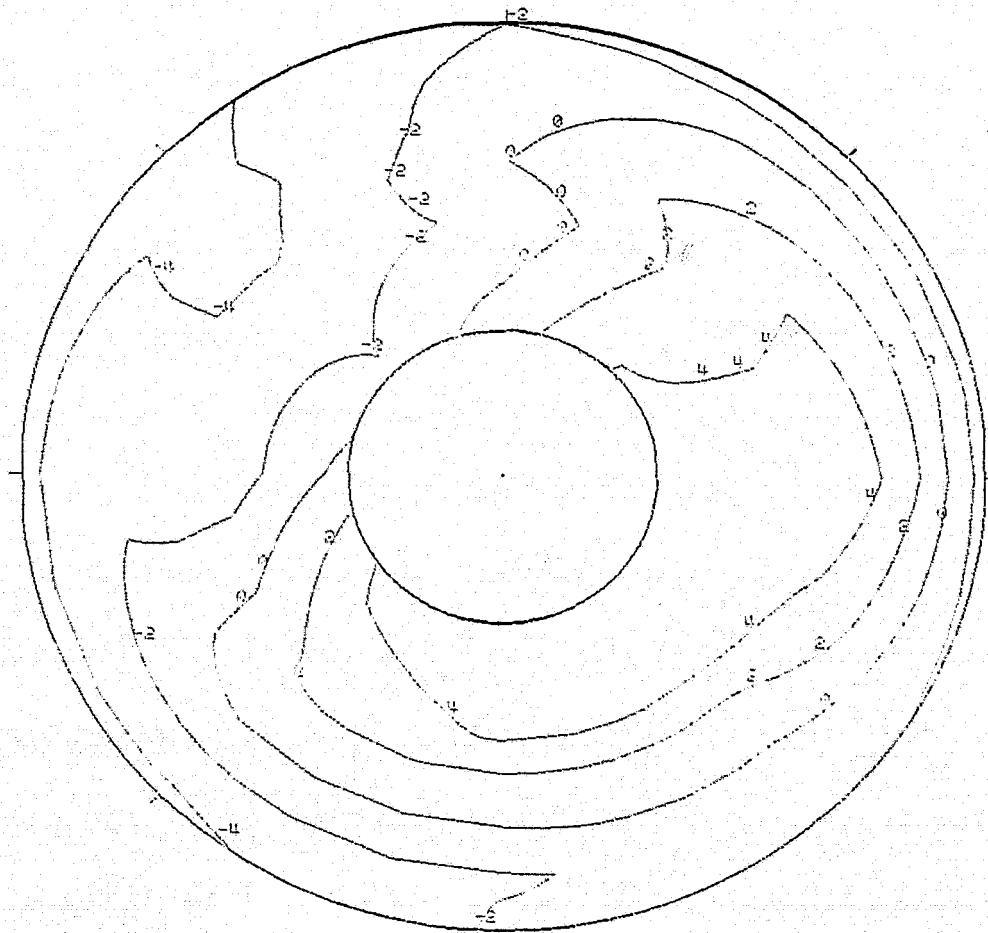
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 5 IDENT. 67
THE SEGMENT START TIME WAS AT 20:19:39.051

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 75.4%	CIVV -25.0
P1 42.19 (6.119)	PI/PS 1.004	KTHETA 0.420	KPA2 0.235	BKPA2 2.554	KPA2 2.974	KC2 0.558	KOSP 0.500
							D2 0.105

67(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
275 Hz



MEAN FACE PRESSURE = 42.19 kPa (6.119 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.088770 SECONDS

FIGURE G-67 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 75.4 %

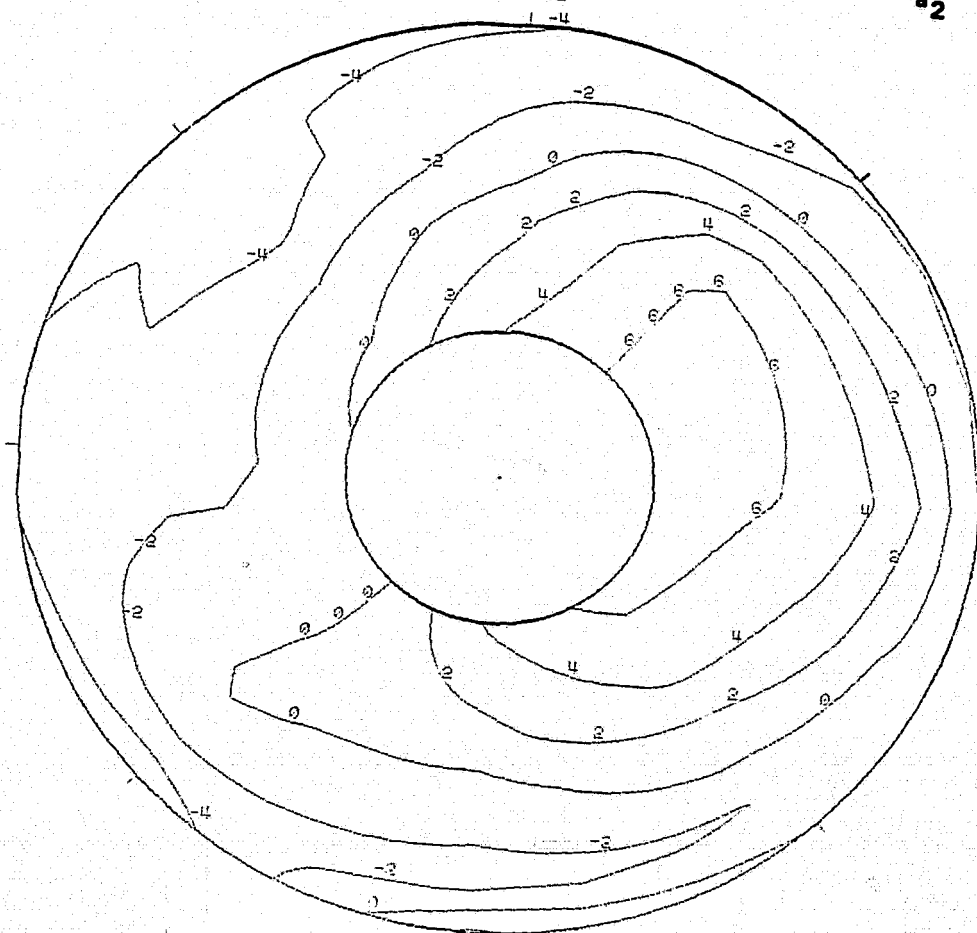
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 5 IDENT. 67
THE SEGMENT START TIME WAS AT 20:19:38.044

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA23 22.5	BYPA33 0.0	WAT2 75.4%	CIVV -25.0
PI 41.99 (6.090)	PI/PS 0.999	KTHETA 0.455	KPA2 0.337	BKPA2 2.907	KQ2 3.362	KC2 0.450	KOSP 0.544
							D2 0.116

67(t) Instantaneous Total Pressure Contour at Peak Instantaneous Ka_2
615 Hz



MEAN FACE PRESSURE = 41.99 kPa (6.090 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.031185 SECONDS

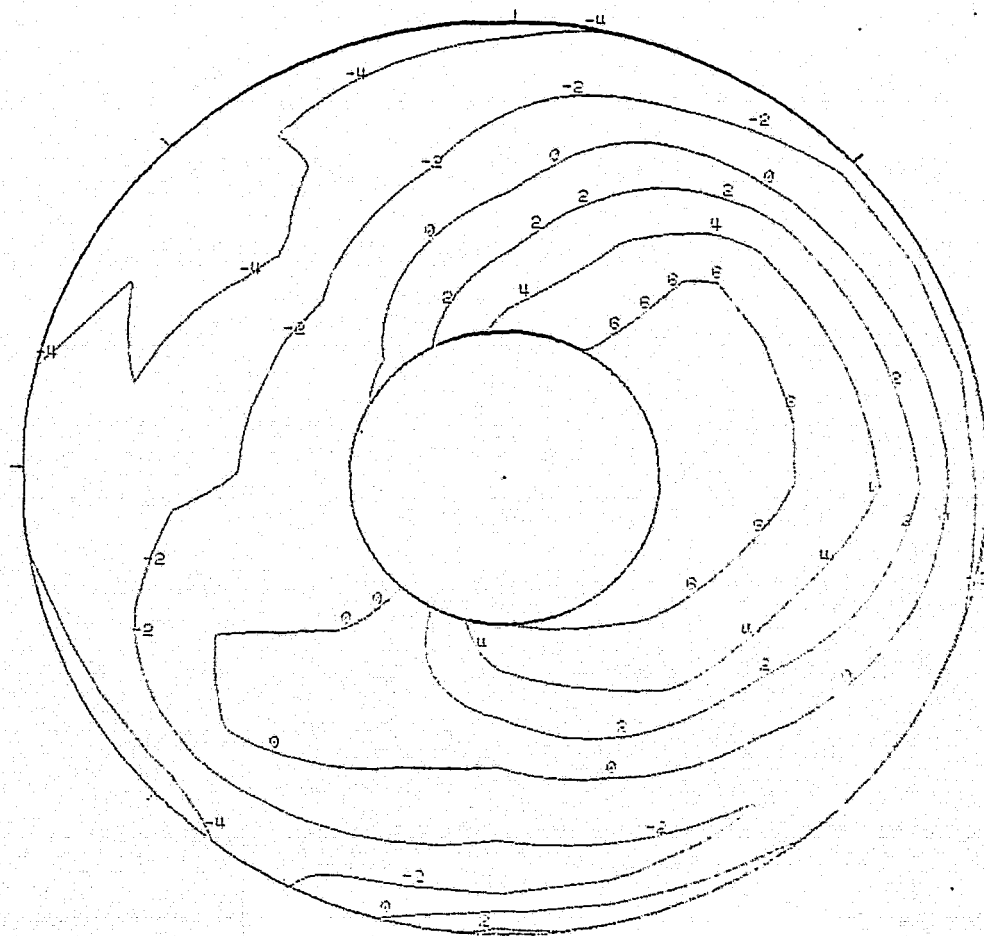
FIGURE G-67 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 75.4 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 5 IDENT. **67**
THE SEGMENT START TIME WAS AT 20:19:33.044

MACH 2.2	ALPHA 0	BETA 0	PHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 75.4%	CIVV -25.0
42.01 (6.093)	PI/PS 1.000	KTHETA 0.457	KPA2 0.348	BKPA2 2.997	KPA2 3.454	KC2 0.492	KOSP 0.549
							D2 0.121

**67(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
1040 Hz**



MEAN FACE PRESSURE = 42.01 kPa (6.093 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.031020 SECONDS

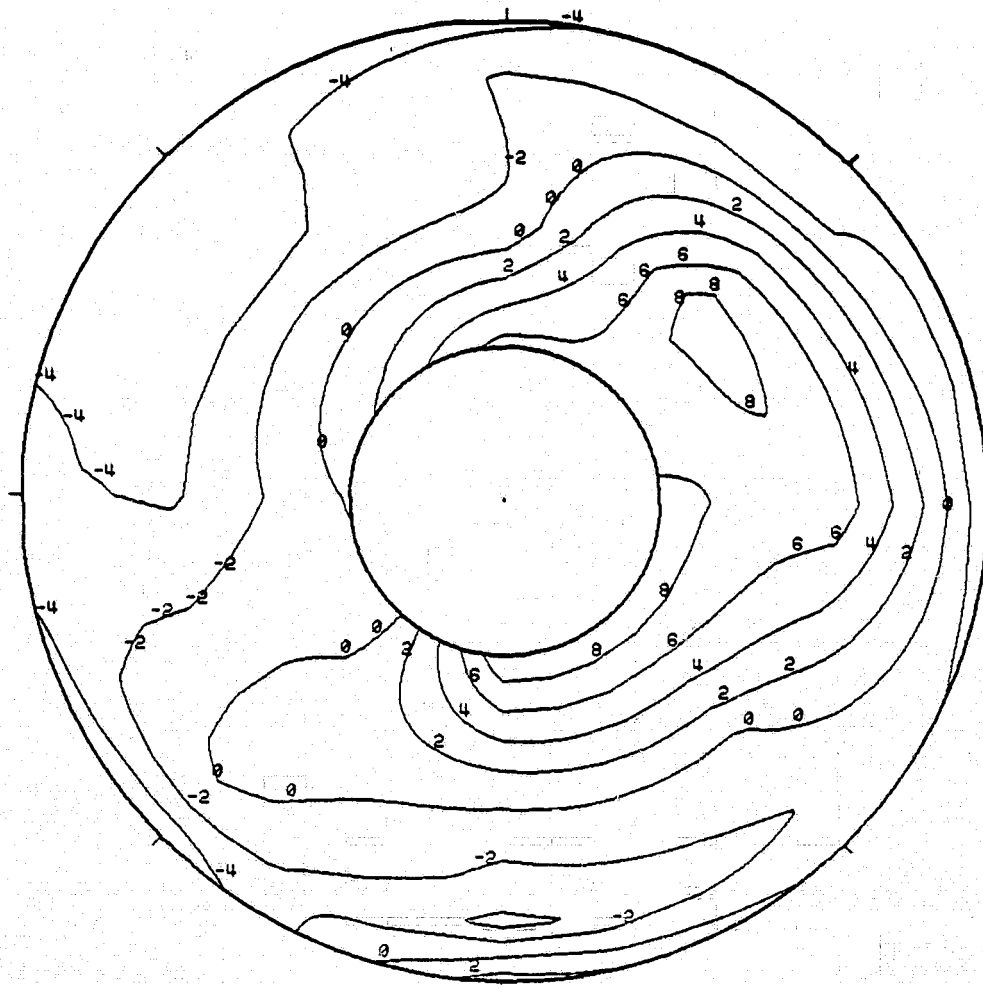
FIGURE G-67 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 75.4 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 184 / 5 IDENT. 87
THE SEGMENT START TIME WAS AT 20:18:38.045

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 75.4%	CLVV -25.0
P1 42.00 (6.092)	P1/PS 1.000	KTHETA 0.484	KRA2 0.387	BKRA2 3.334	KRA2 3.817	KC2 0.533	KOSP 0.603
							D2 0.147

**67(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
3070 Hz**



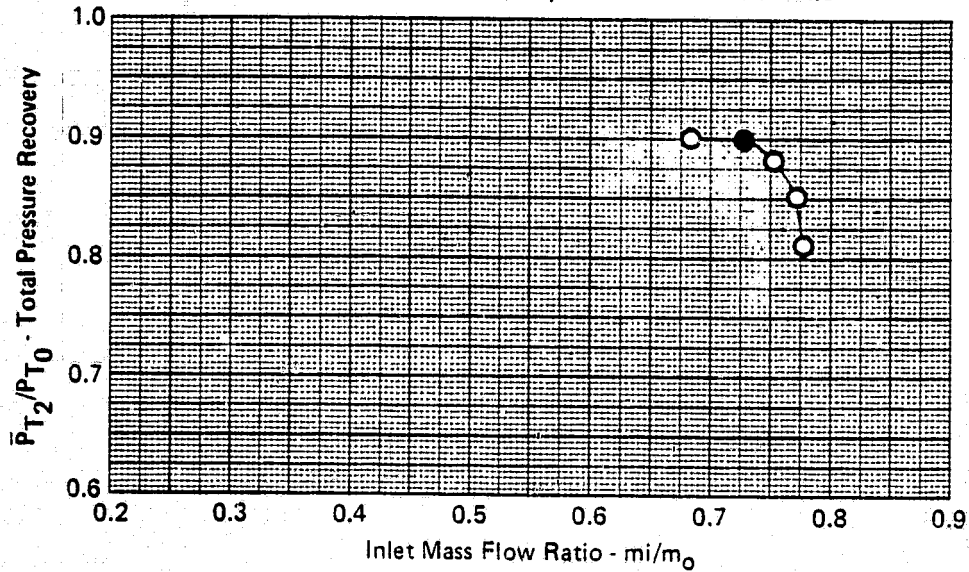
MEAN FACE PRESSURE = 42.00 kPa (6.092 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.031140 SECONDS

**FIGURE G-67 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 75.4 %**

FSCP - NASA Data Study
Part/Point - 413/9, Ident 68

RHO	DELTA3	BYPASS	CIVV
-2.0	22.5	0.0	-25.00

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



(b) Total Pressure Recovery vs Percent Corrected Airflow

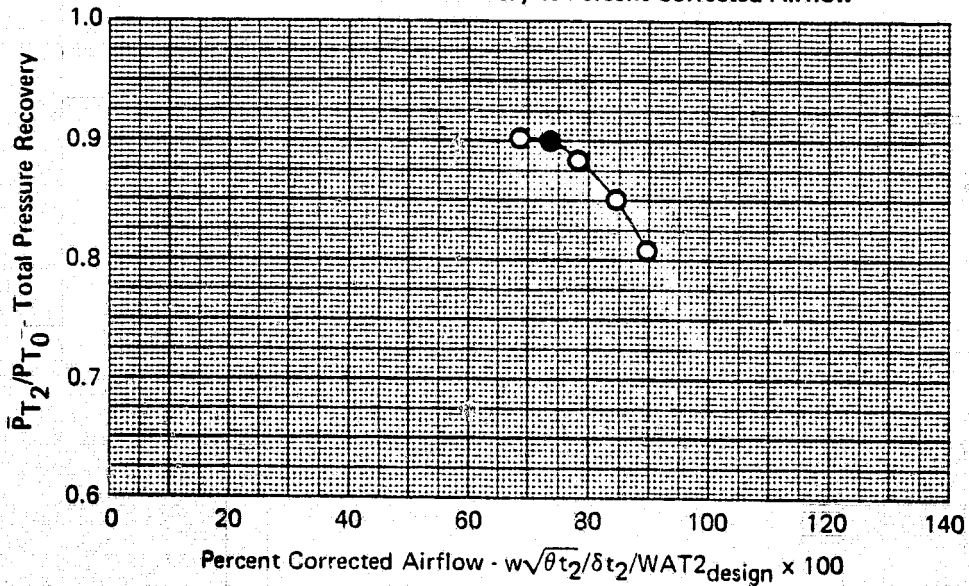
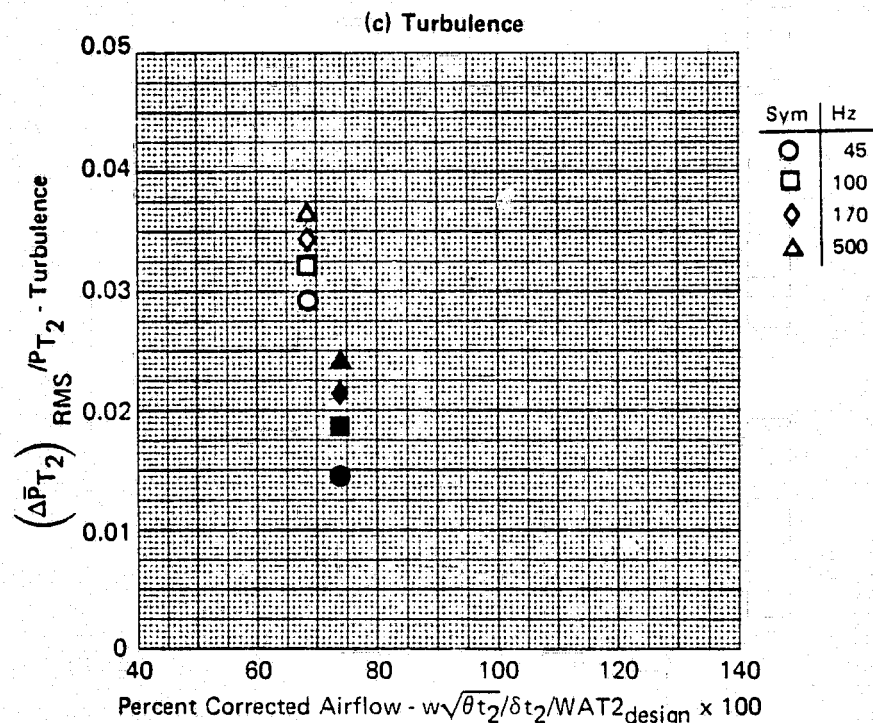


FIGURE G-68
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = 0.0, \beta = 0.0, WAT2 = 73.6 \%$

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FSCP - NASA Data Study
 Part/Point - 413/9, Ident 68
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00



GP77-0658-5

FIGURE G-68 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 73.6\%$

FSCP - NASA Data Study
 Part/Point - 413/9, Ident 68
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00

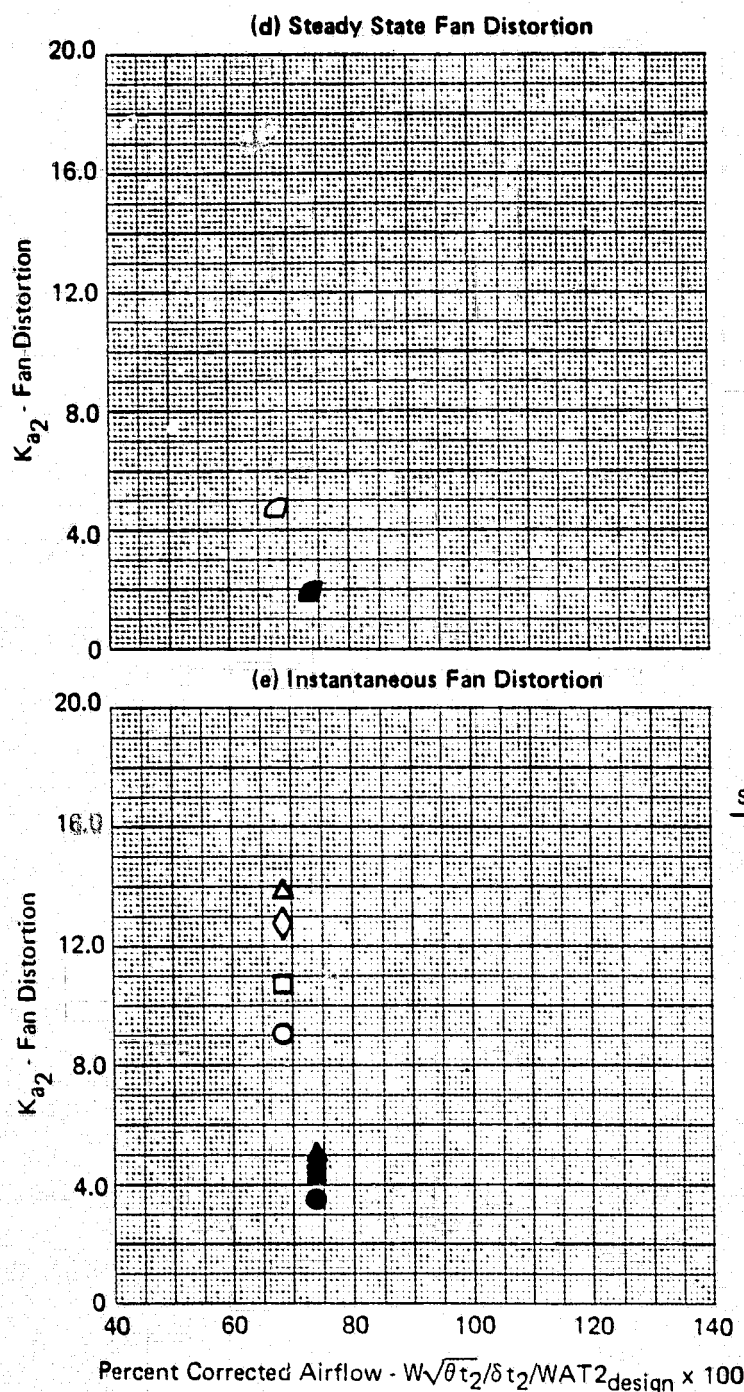
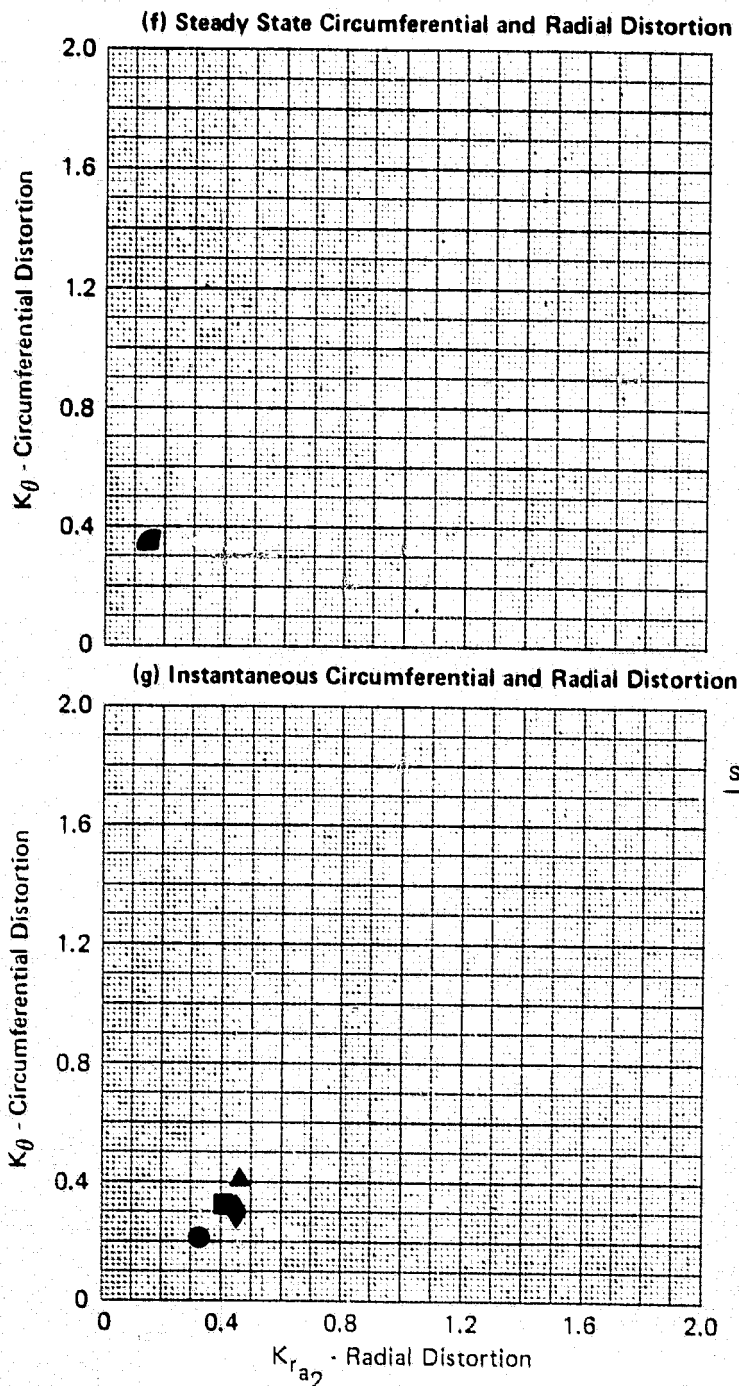


FIGURE G-68 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 73.6\%$

FSCP - NASA Data Study
 Part/Point - 413/9, Ident 68
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00

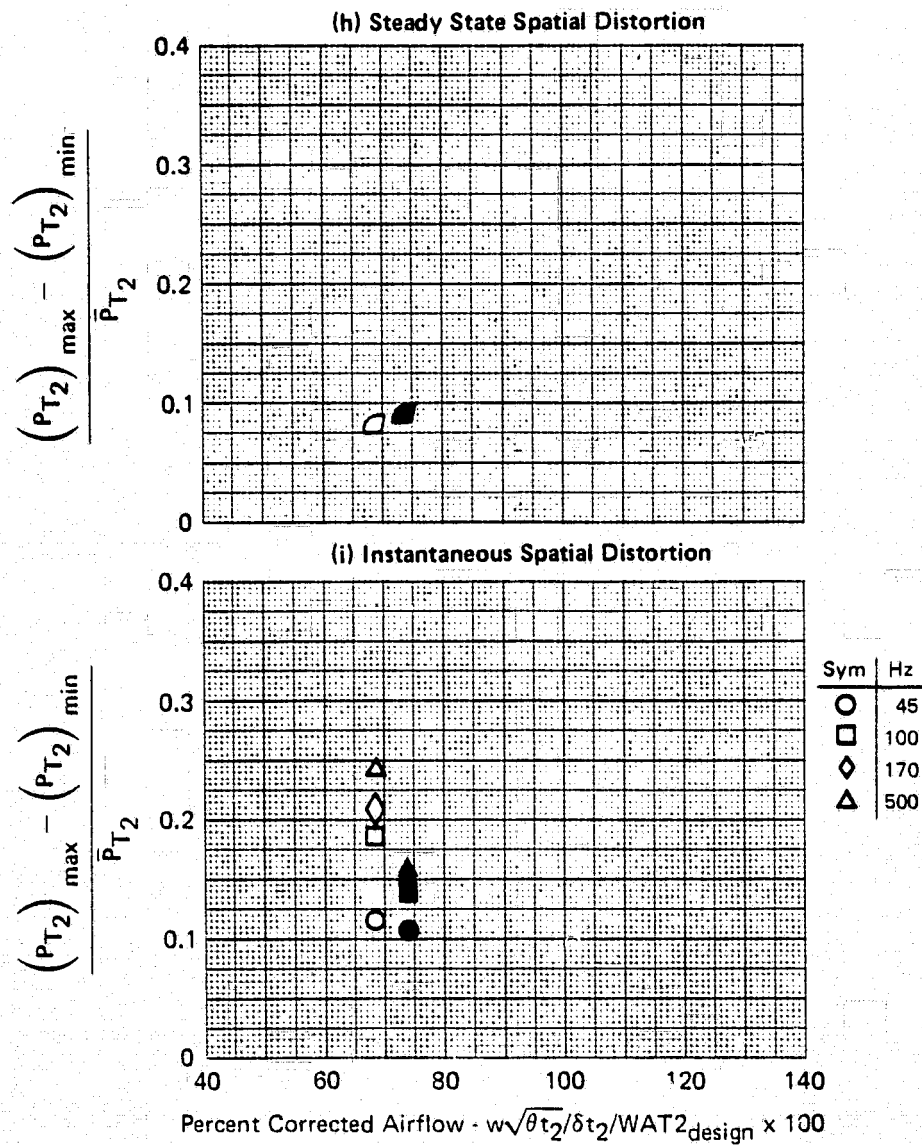


GP77-0658-2

FIGURE G-68 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 73.6 %

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FSCP - NASA Data Study
 Part/Point - 413/9, Ident 68
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00



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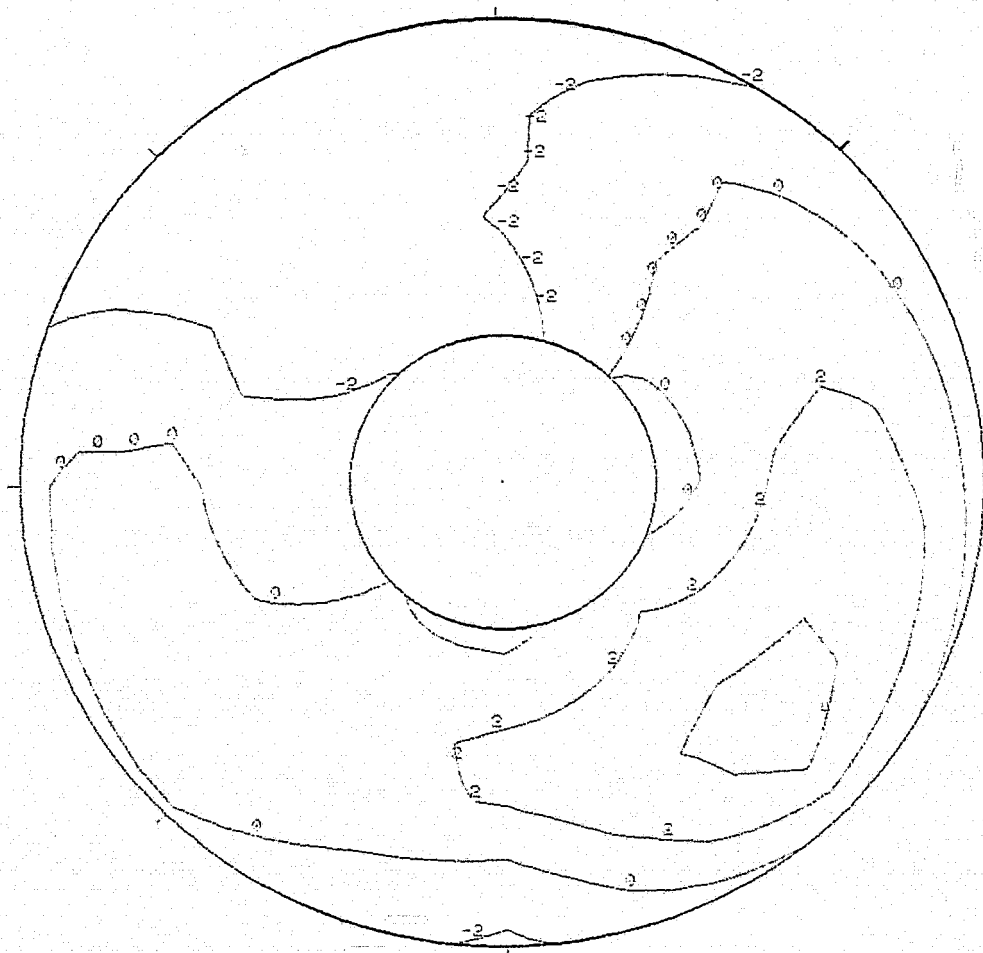
FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 73.6\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 413 / 9 IDENT, 68
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 73.6%	CIVV -25.0
PI 43.18 (6.263)	PI/PS 1.000	KTHETA 0.046	KPA2 0.146	BKPA2 1.507	KP2 1.354	KC2 0.379	KASP 0.361
							Q2 0.037

68 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 43.18 kPa (6.263 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 73.6 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 / 9 IDENT. 68
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH
2.2

ALPHA
0

BETA
0

RHO
-3.0

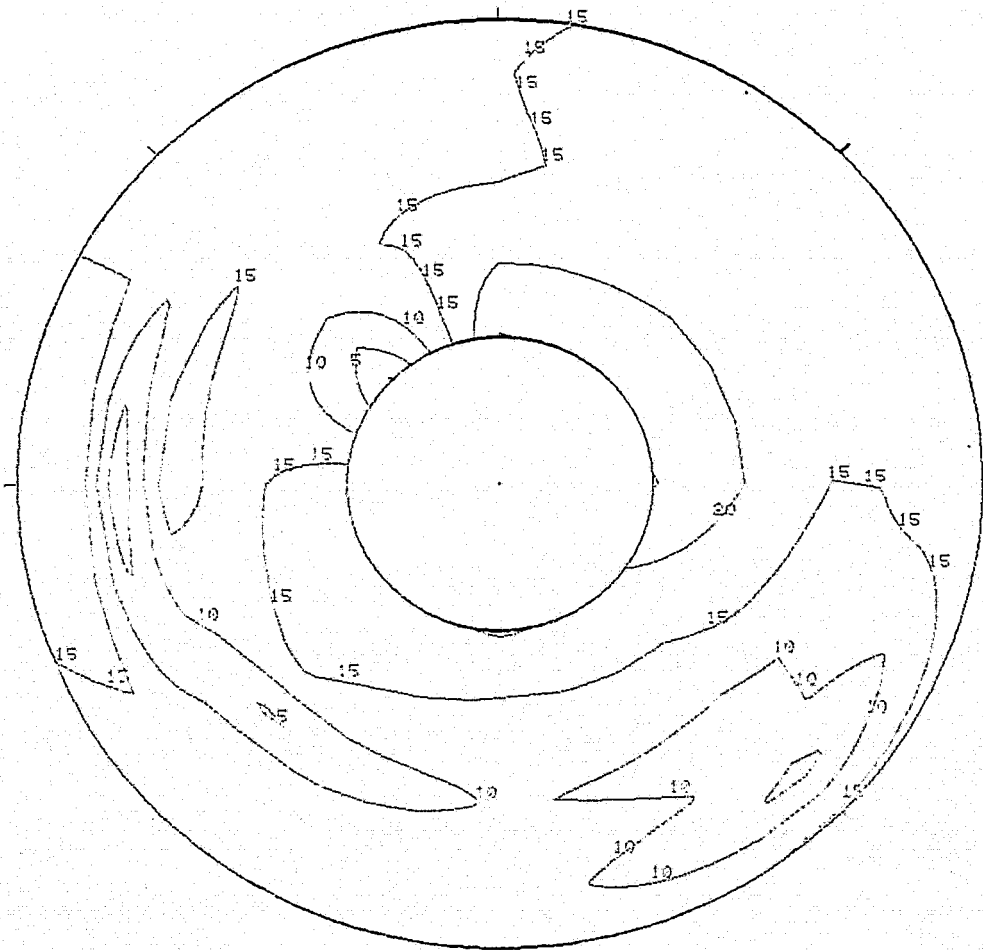
DELTA3
22.5

BYPASS
0.0

WAT2
73.6%

CIVV
-25.0

68(k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01440

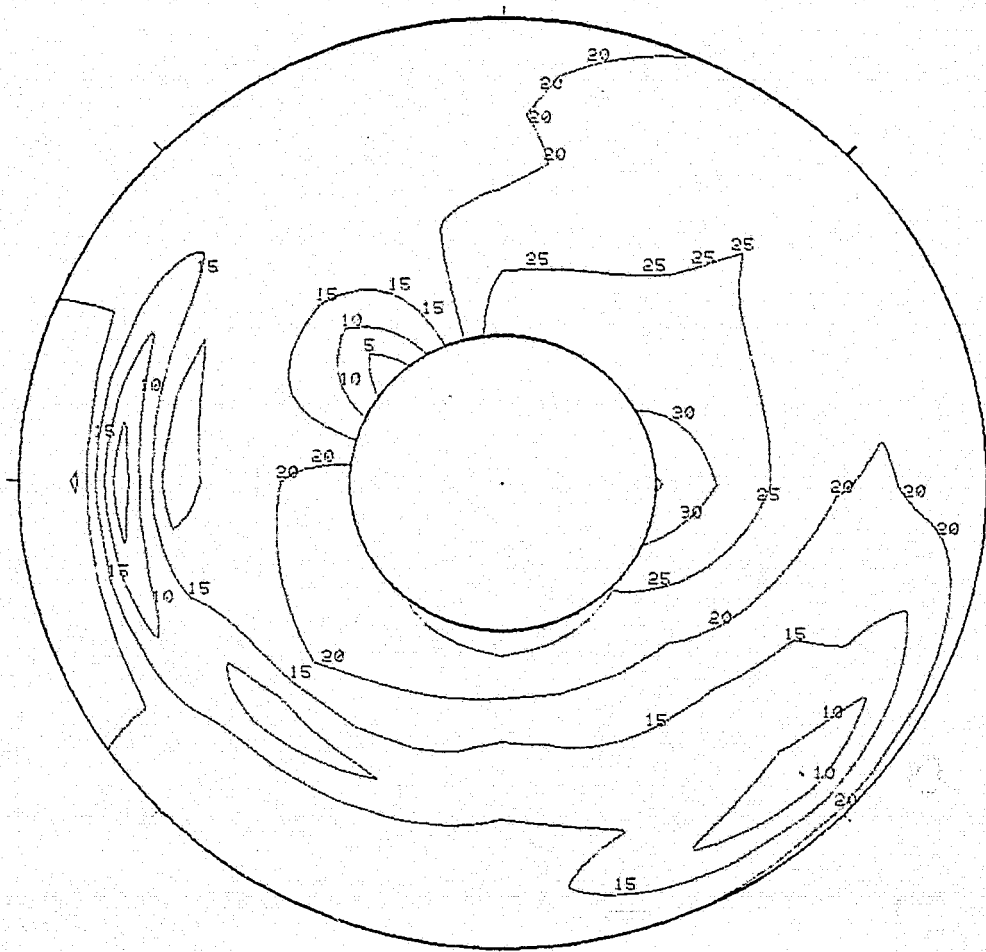
FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 73.6 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 / 3 IDENT. 68
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
2.2	0	0	-2.3	32.5	0.0	73.6%	-25.0

68(I) Turbulence Contour 100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01882

FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 73.6\%$

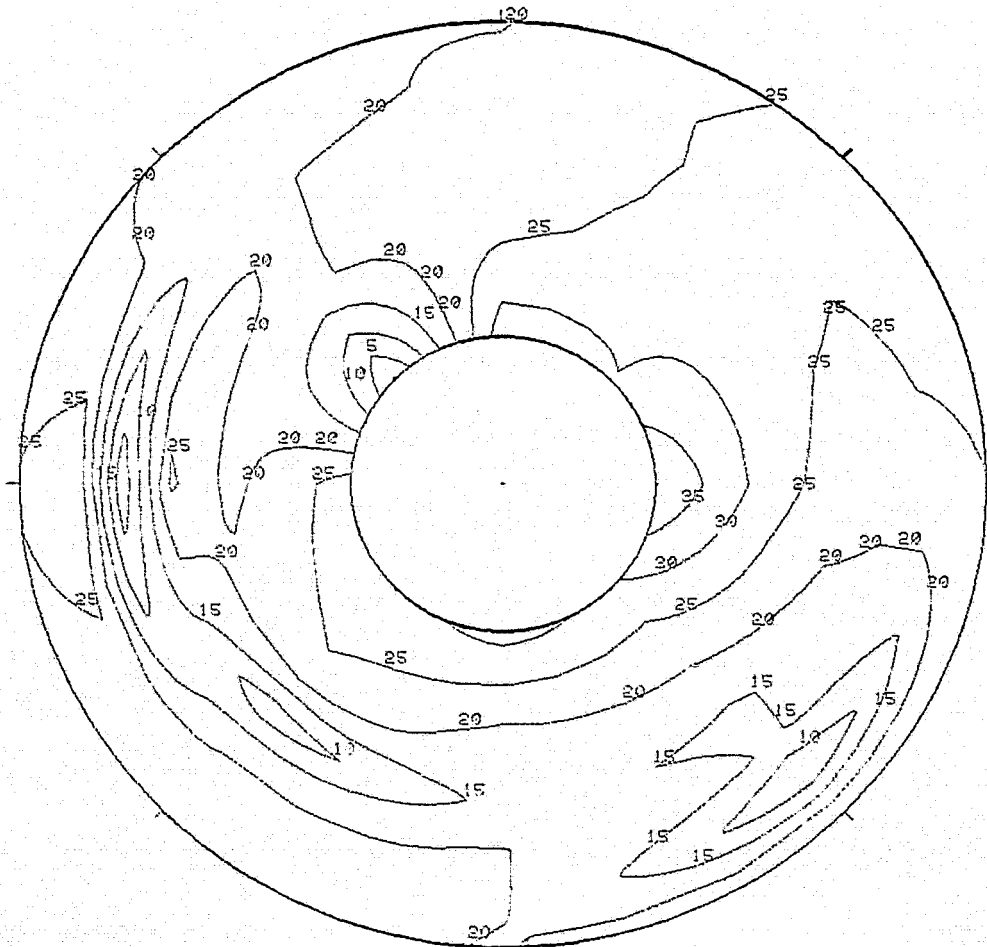
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FSCP - NASA DATA STUDY

DATA PART/POINT 413 / 9 IDENT. 88
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH 2.2 ALPHA 0 BETA 0 RHO -2.0 DELTA3 22.5 BYPASS 0.0 WAT2 73.6% CIVV -25.0

68(m) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02124

FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 73.6 %

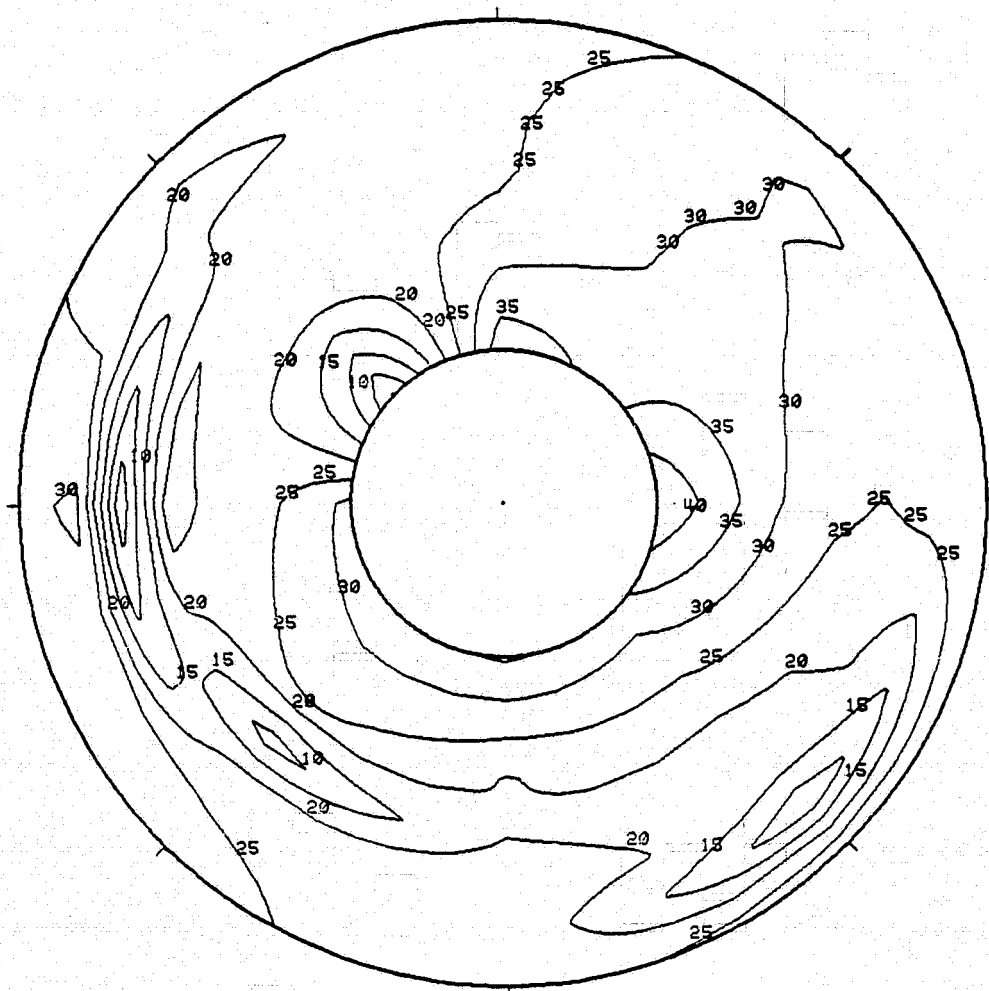
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FSCP - NASA DATA STUDY

DATA PART/POINT 413 / 9 IDENT. 68
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH	ALPHA	BETA	RHO	DEL T83	BYPASS	WAT2	CIVV
2.2	0	0	-2.0	22.5	0.0	73.6%	-25.0

68 (n) Turbulence Contour
500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02407

FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 73.6 %

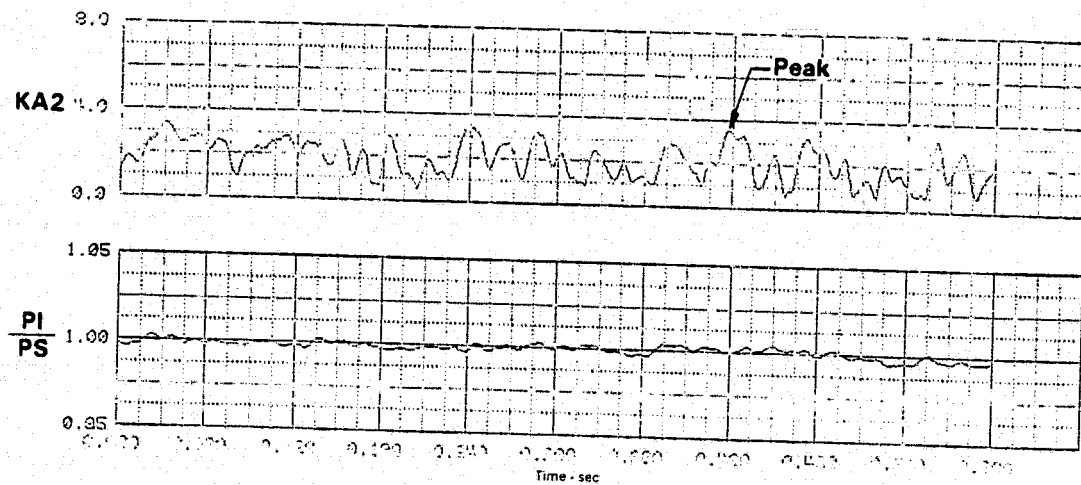
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OF POOR QUALITY

FSCP - NASA DATA STUDY

DATA PART/POINT 413 / 9 IDENT. 68
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 23.5	BYPASS 0.0	WAT2 73.6%	CIVV -25.0
43.17 (6.261)	PI/PS 1.003	KTHETA 0.212	KPA2 0.338	BKPA2 3.353	KQ2 3.565	KQ3 0.250	KQSP 0.237
							D2 0.107

68(o) Time History Plots 45 Hz



PEAK AT TIME = 0.416570 SECONDS

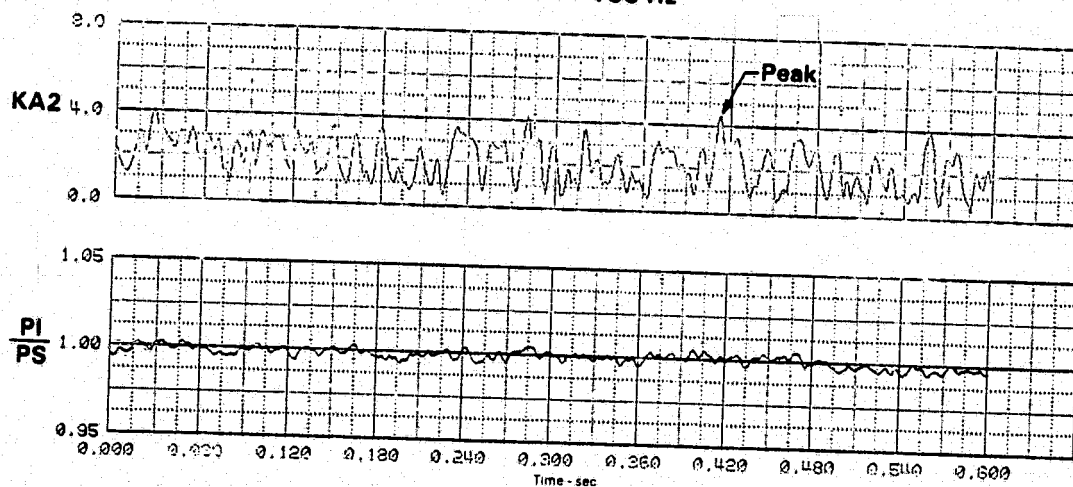
FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 73.6\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 413 / 9 IDENT. 68
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 73.6%	CIVV -25.0
PI 43.13 (6.255)	PI/PS 0.993	KTHETA 0.324	KRA2 0.403	BKRA2 1.142	KA2 4.467	KC2 0.357	KQSP 0.403
							D2 0.137

68(p) Time History Plots
100 Hz



PEAK AT TIME = 0.413324 SECONDS

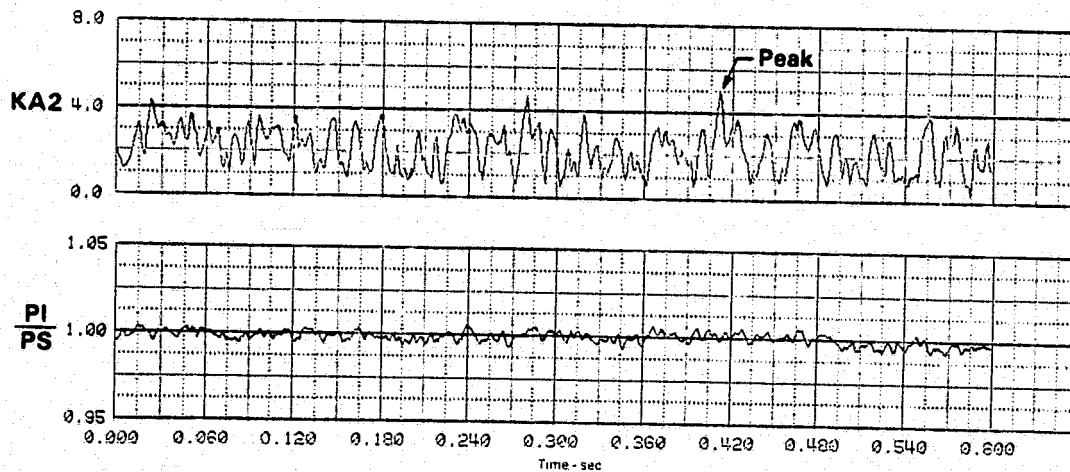
FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 73.6 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 / 9 IDENT. 68
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 73.6%	CIVV -25.0
PI 43.22 (6.269)	PI/PS 1.001	KTHETA 0.501	KPA2 0.452	BKFA2 1.652	KQ2 4.353	KQ2 0.353	KQSP 0.373
							D2 0.150

68(q) Time History Plots 170 Hz



PEAK AT TIME = 0.411160 SECONDS

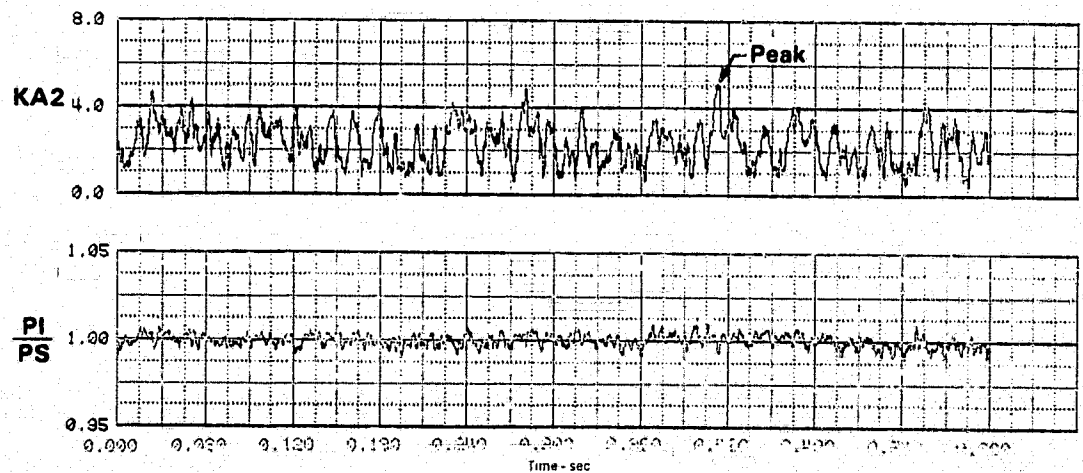
FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 73.6 %

FSCP- NASA DATA STUDY

DATA PART/POINT 413 / 9 IDENT. 68
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 73.6%	CIVV -25.0
PI 43.17 (0.261)	PI/PS 1.000	KTHETA 0.407	KRA2 0.458	BKRA2 4.714	KA2 5.121	KC2 0.436	KOSP 0.510
							D2 0.159

68(r) Time History Plots 500 Hz



PEAK AT TIME = 0.412462 SECONDS

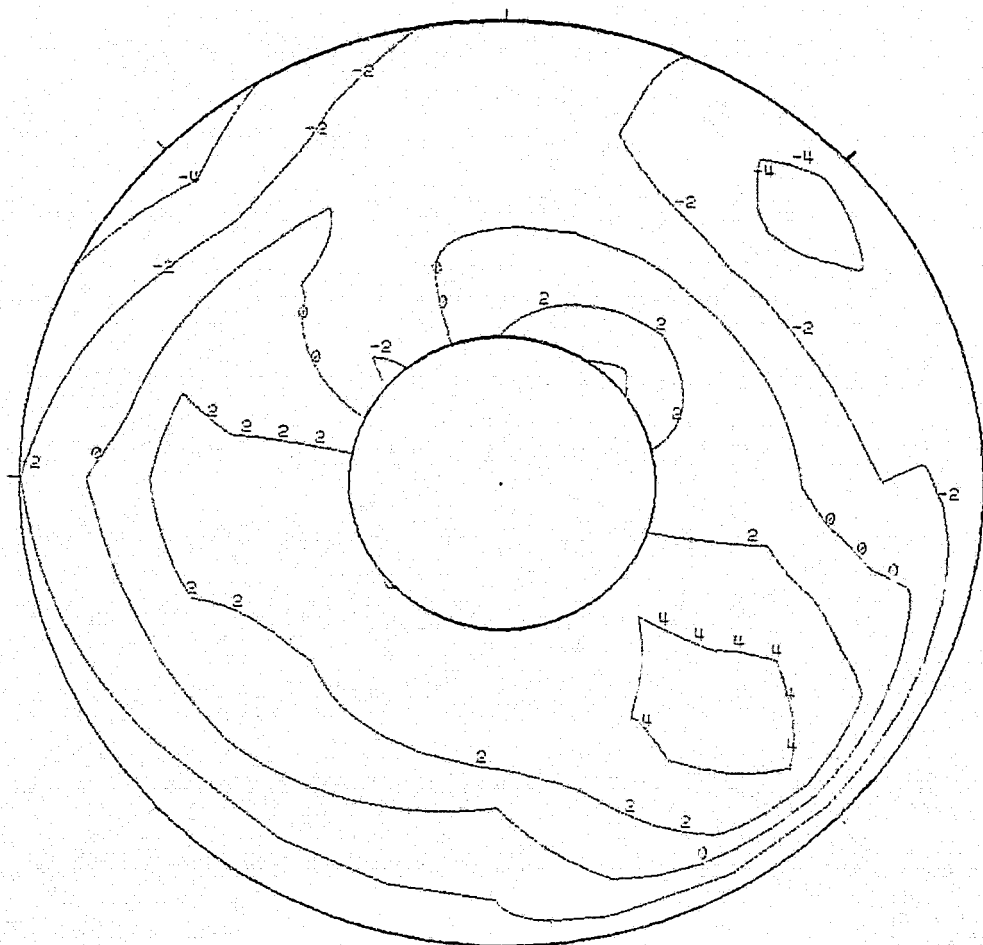
FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 73.6 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 / 9 IDENT. 00
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH 2.2	ALPHA 0	BETA 0	PHO -2.7	DELTA3 22.5	BYPASS 0.0	WAT2 73.6%	CIVV -25.0
P1 43.17 (6.261)	P1/P3 1.000	KTHETA 0.212	KRA2 0.328	BKRA2 3.353	KA2 2.565	KC2 0.150	KOSP 0.237
							D2 0.107

68(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz



MEAN FACE PRESSURE = 43.17 kPa (6.261 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.416570 SECONDS

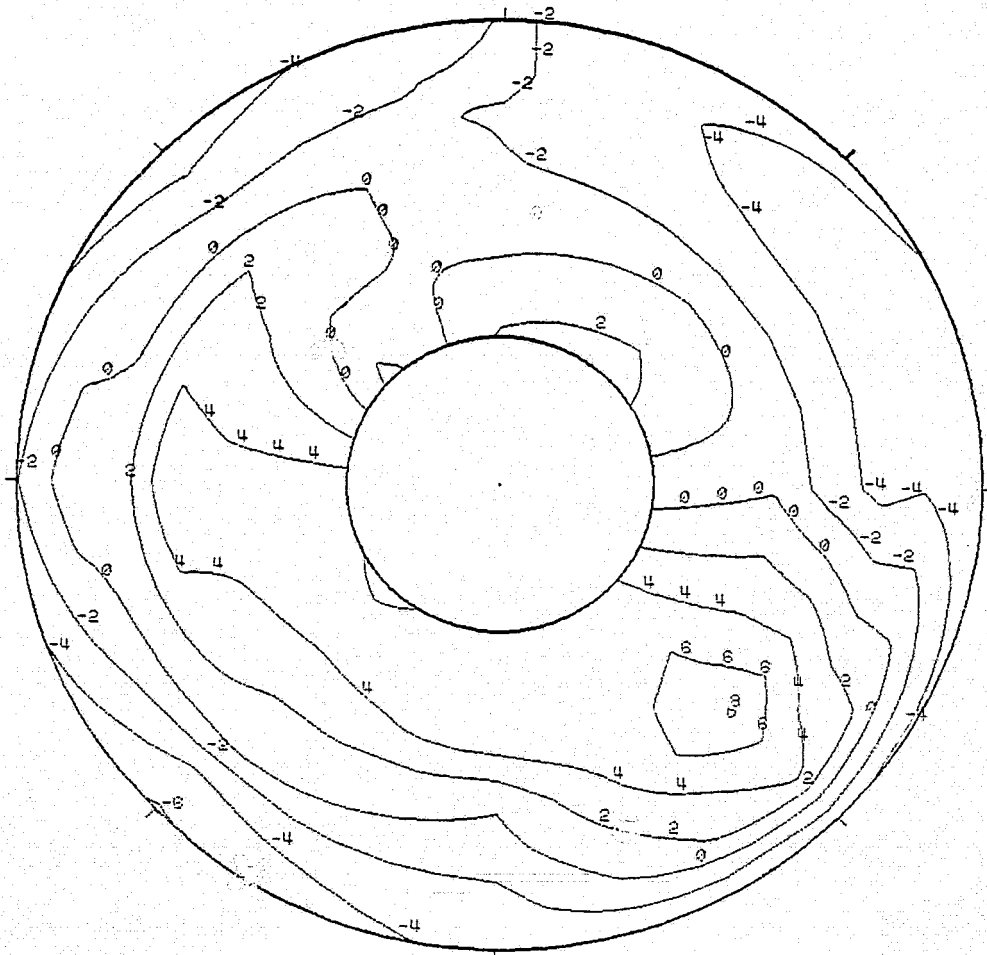
FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 73.6 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 / 9 IDENT. 88
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 73.6%	CIVV -25.0
PI 43.13 (6.255)	PI/PS 0.993	KTHETA 0.324	KRA2 0.403	BKRA2 4.142	KA2 4.467	KC2 0.387	KOSP 0.403
							D2 0.137

68(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz



MEAN FACE PRESSURE = 43.13 kPa (6.255 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.413324 SECONDS

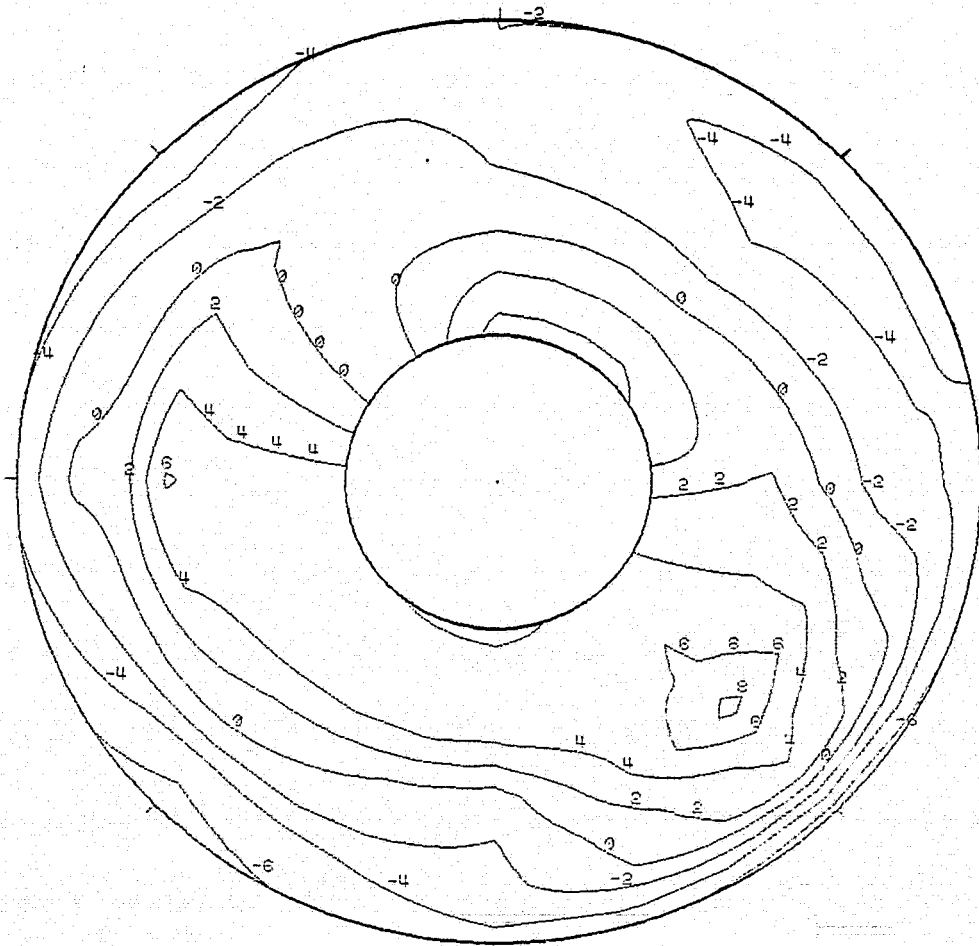
FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 73.6 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 / 9 IDENT. 00
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.6	BYPASS 0.0	WAT2 73.6%	CIVV -25.0
P1 43.22 (6.269)	P1/PS 1.001	KTHETA 0.301	KRA2 0.452	BKRA2 4.652	KA2 4.953	KC2 0.362	KOSP 0.372
							D2 0.150

**68(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz**



MEAN FACE PRESSURE = 43.22 kPa (6.269 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.411160 SECONDS

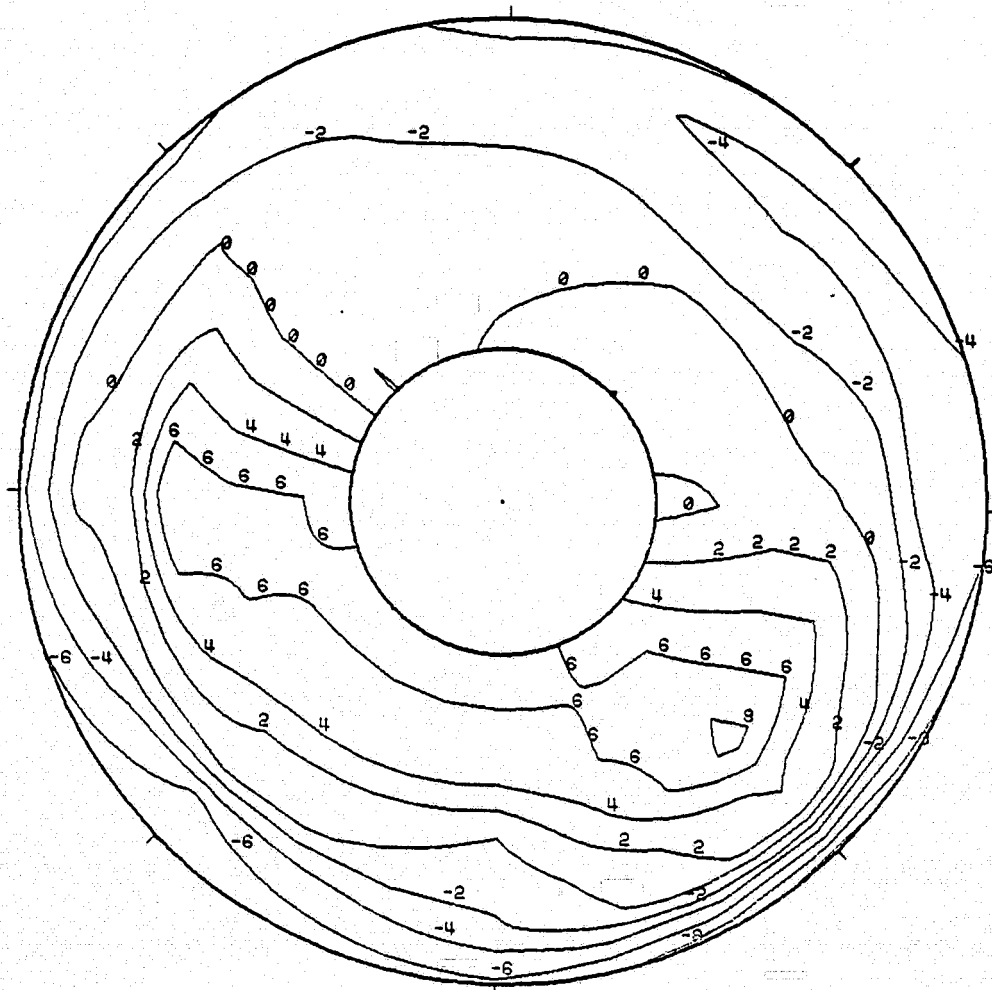
FIGURE G-68 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 73.6 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 / 9 IDENT. 00
THE SEGMENT START TIME WAS AT 22:30:15.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 73.6%	CIVV -25.0
P1 43.17 (6.261)	PI/PS 1.000	KTHETA 0.407	KRA2 0.458	BKRA2 4.714	KA2 5.121	KC2 0.496	KOSP 0.510
							D2 0.159

68(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz

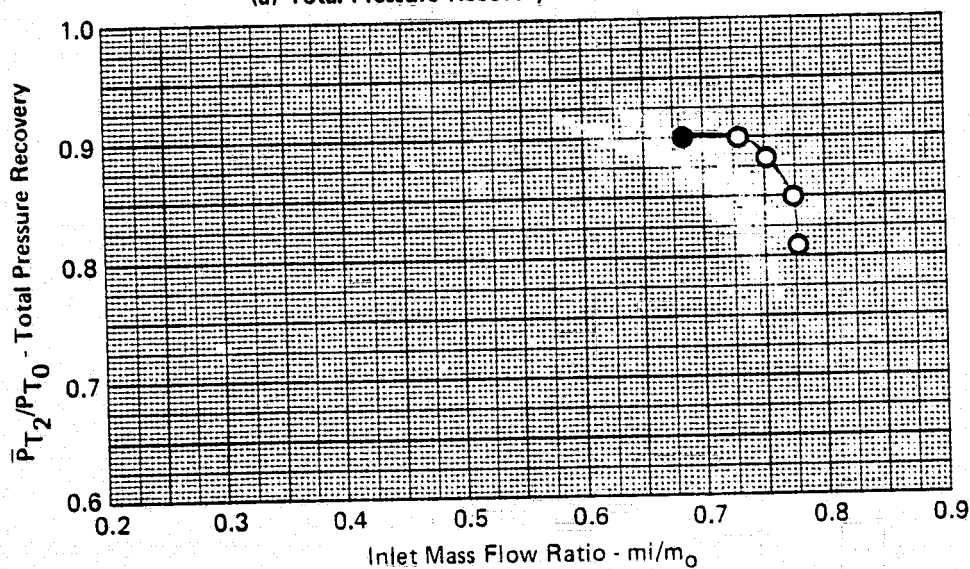


MEAN FACE PRESSURE = 43.17 kPa (6.261 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.412462 SECONDS

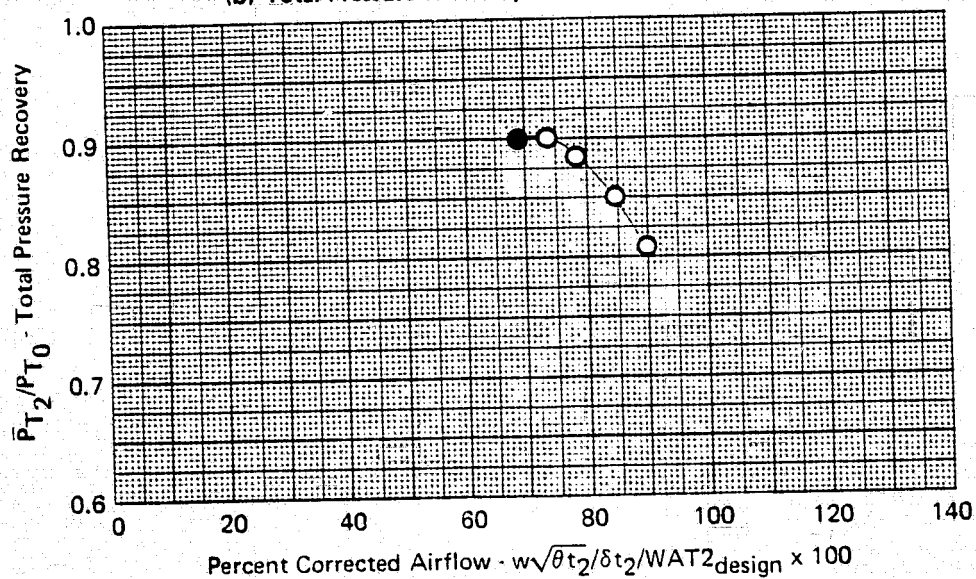
FIGURE G-68 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 73.6 %

FSCP - NASA Data Study
 Part/Point - 413/12, Ident 69
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



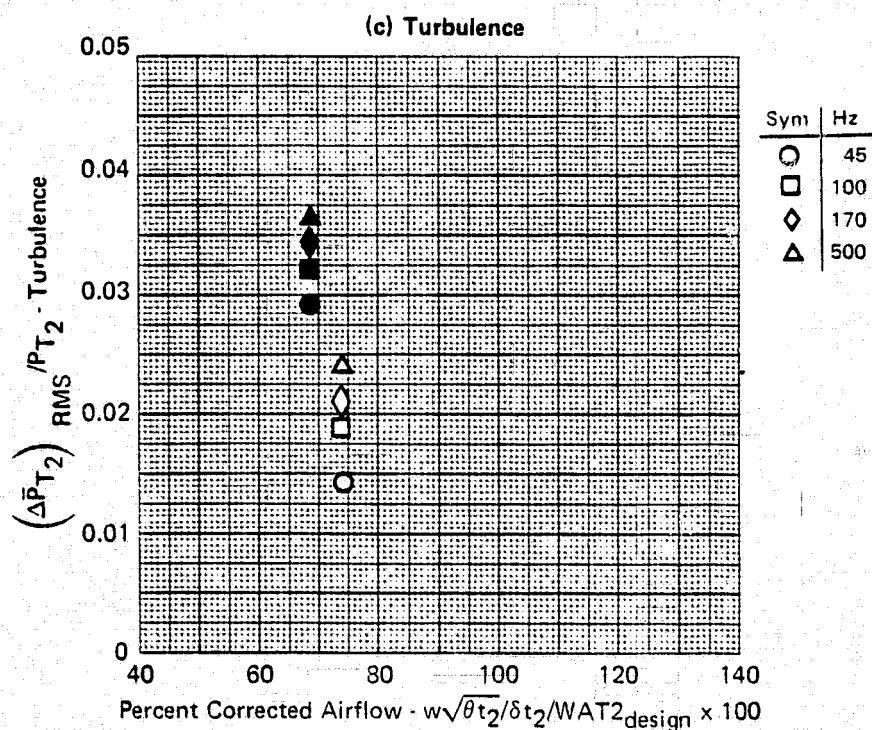
(b) Total Pressure Recovery vs Percent Corrected Airflow



GP77-0658-1

FIGURE G-69
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.3\%$

FSCP - NASA Data Study
 Part/Point - 413/12, Ident 69
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00



GP77-0658-5

FIGURE G-69 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.3\%$

FSCP - NASA Data Study
 Part/Point - 413/12, Ident 69
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00

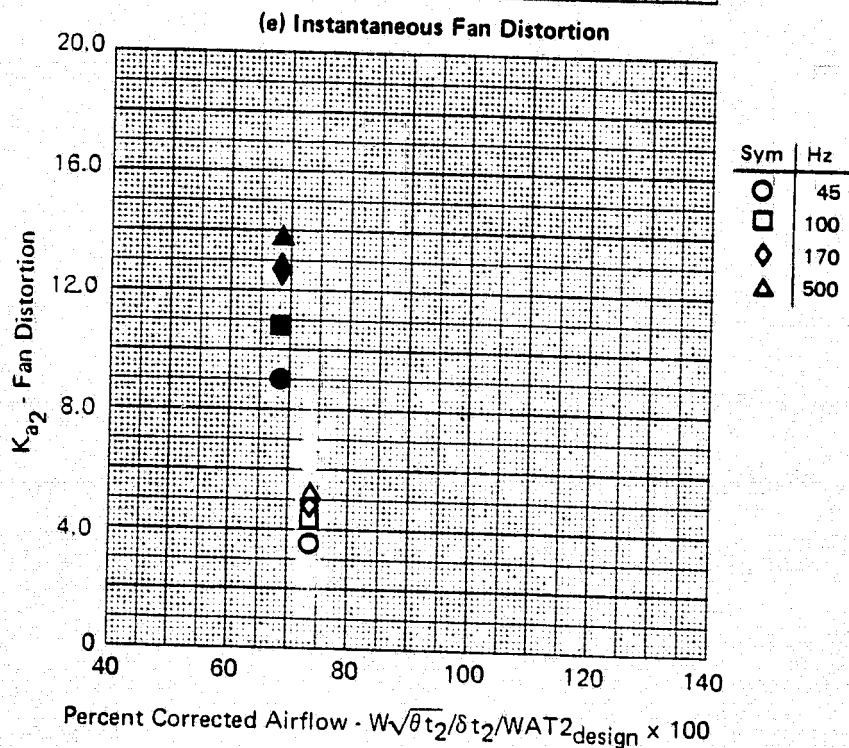
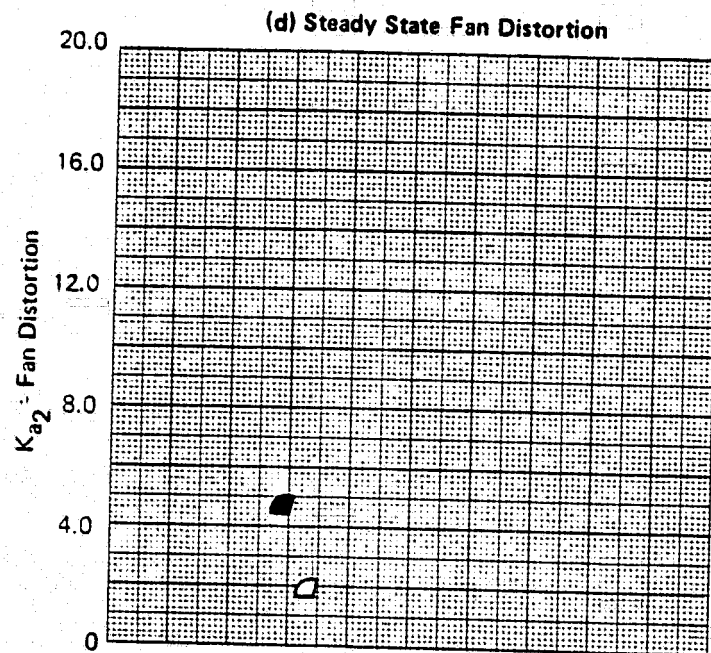
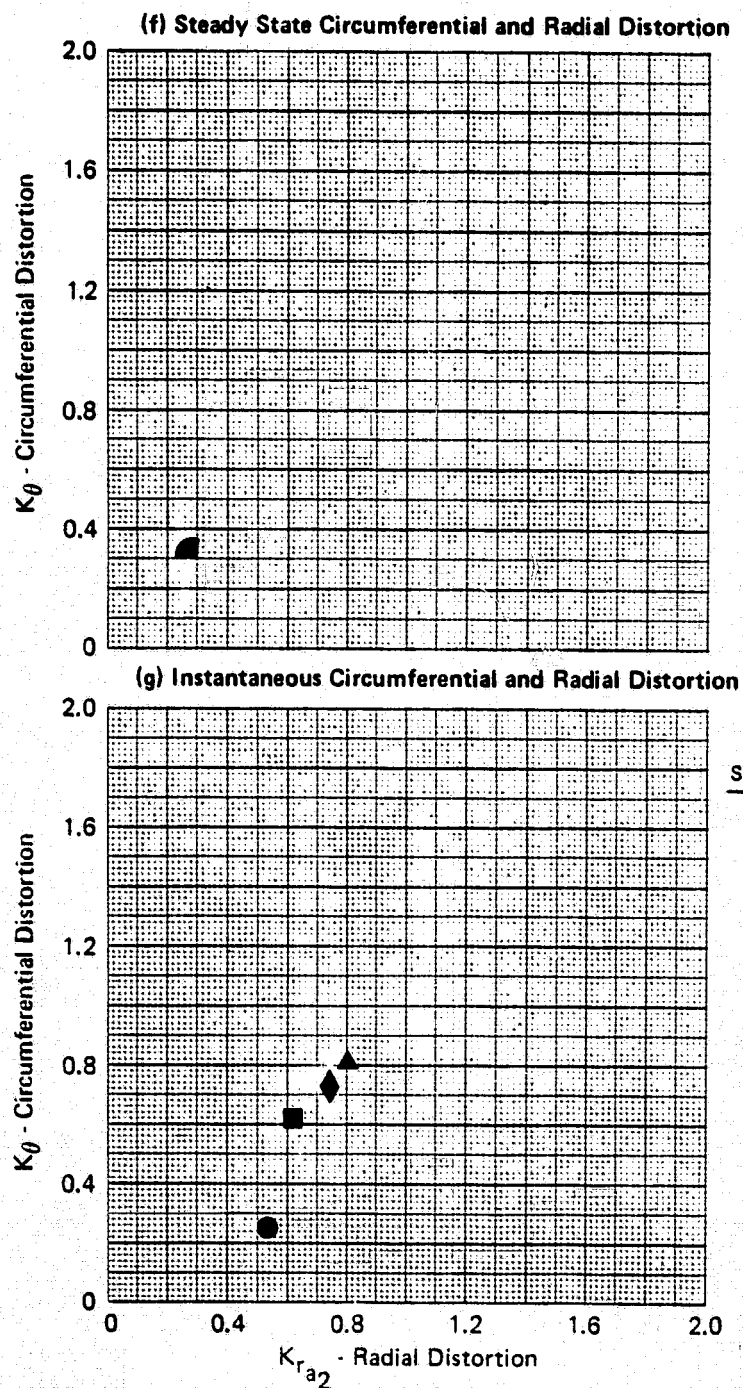


FIGURE G-69 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.3\%$

GP77 0658-3

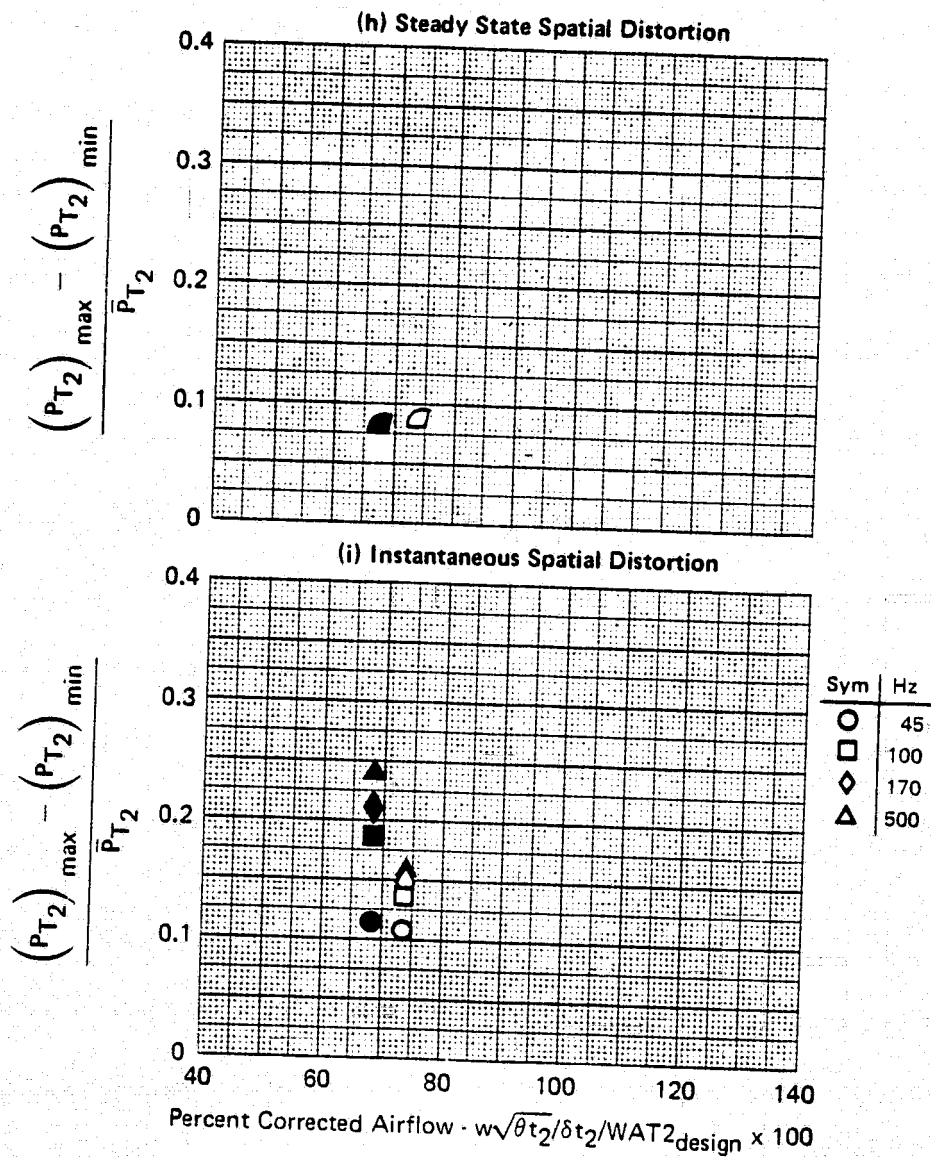
FSCP - NASA Data Study
 Part/Point - 413/12, Ident 69
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00



GP77-0658-2

FIGURE G-69 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.3\%$

FSCP - NASA Data Study
 Part/Point - 413/12, Ident 69
 RHO DELTA3 BYPASS CIVV
 -2.0 22.5 0.0 -25.00



GP77-0658-4

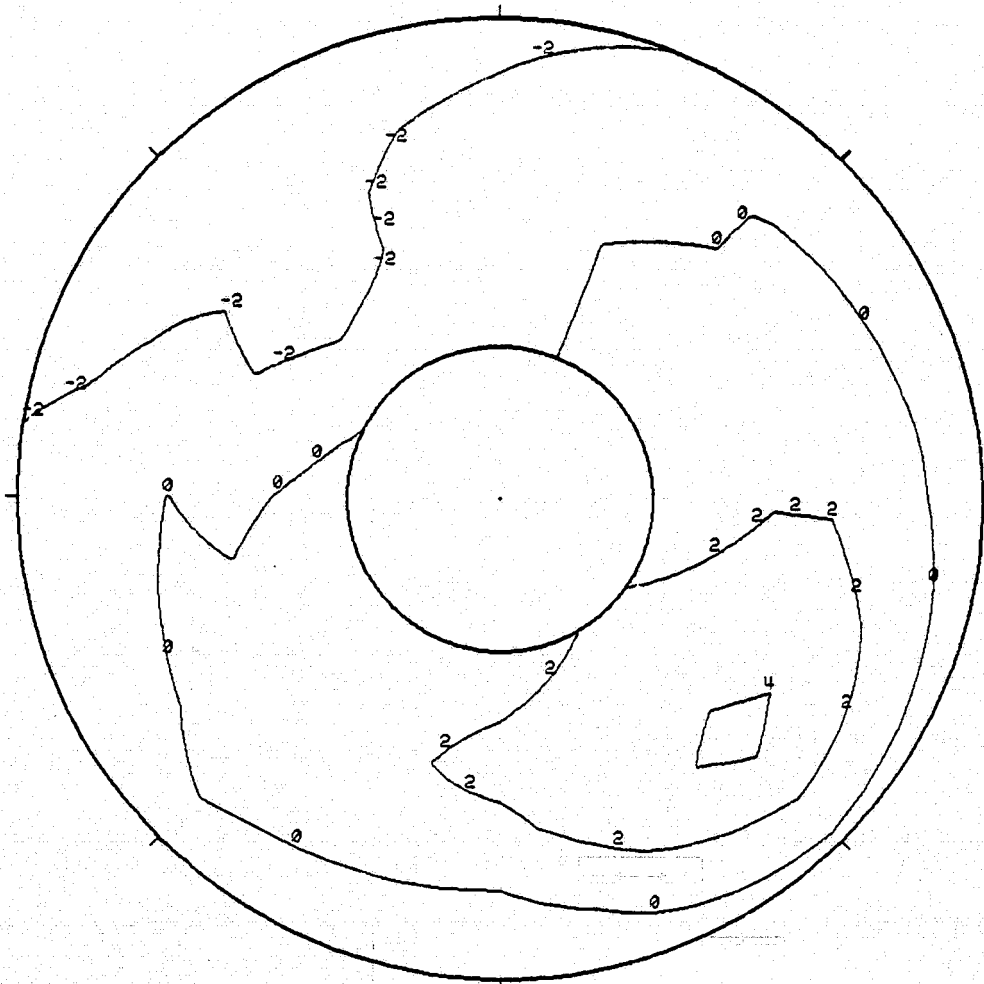
FIGURE G-69 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.3\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 413 /12 IDENT. 00
THE SEGMENT START TIME WAS AT 22:34:20.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 68.3%	CIVV -25.0
PI 43.00 (6.237)	PI/PS 1.000	KTHETA 0.335	KRA2 0.266	BKRA2 4.336	KR2 4.671	KC2 0.334	KESP 0.365
							D2 0.080

69 (J) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 43.00 kPa (6.237 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

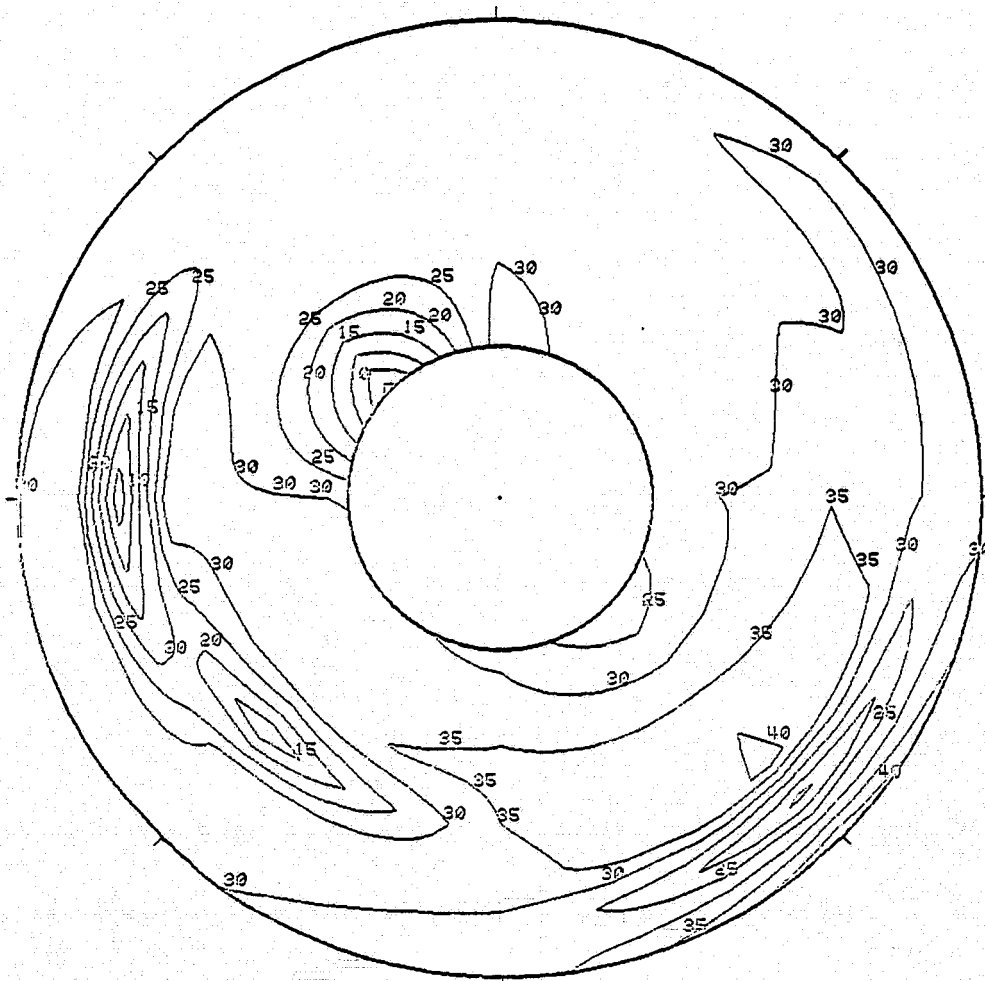
FIGURE G-69 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.3 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 /12 IDENT. 69
THE SEGMENT START TIME WAS AT 22:34:20.140

MACH 2.2 ALPHA 0 BETA 0 RHO -2.2 DELTA3 22.5 BYPASS 0.0 WAT2 68.3% CIVV -25.0

69(k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02911

FIGURE G-69 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.3 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 /12 IDENT. 69
THE SEGMENT START TIME WAS AT 22:34:20.140

MACH
2.2

ALPHA
0

BETA
0

RHO
-2.0

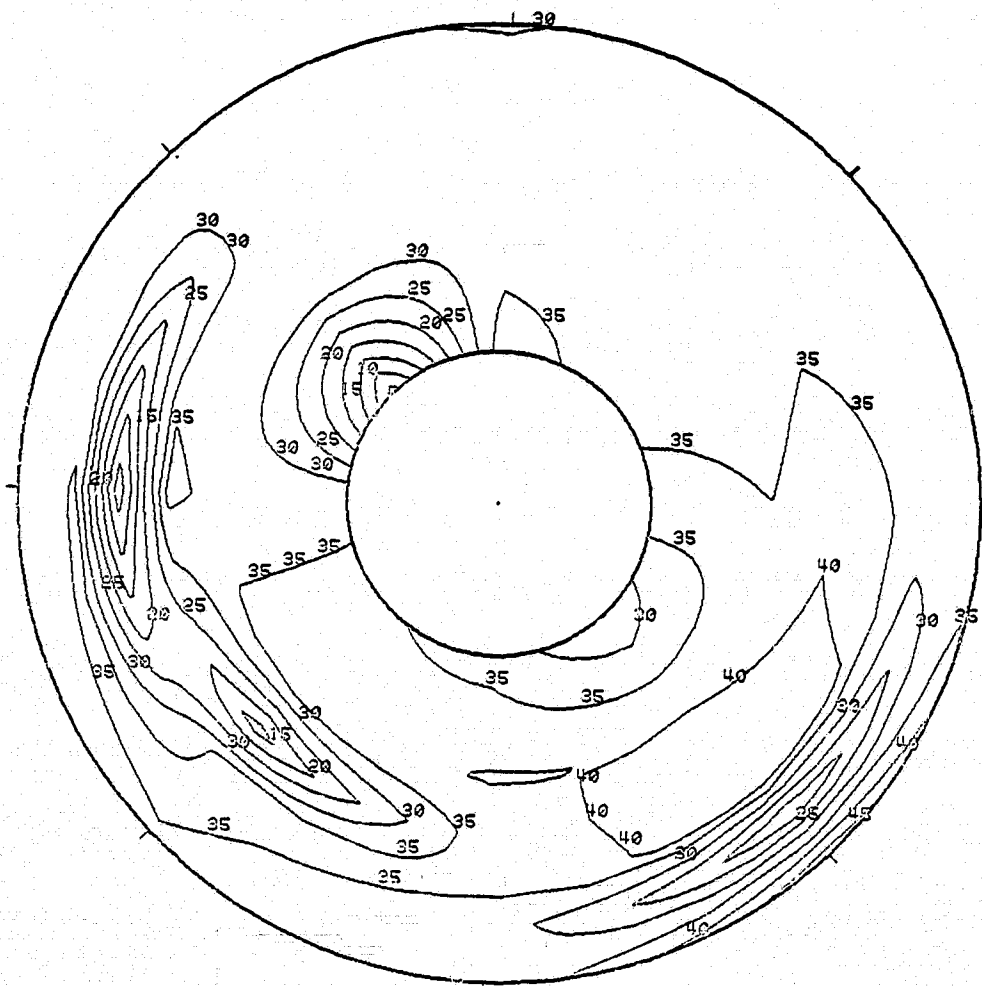
DEL T3
22.5

BYPASS
0.0

WAT2
68.3%

CIVV
-25.0

69(I) Turbulence Contour 100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .03241

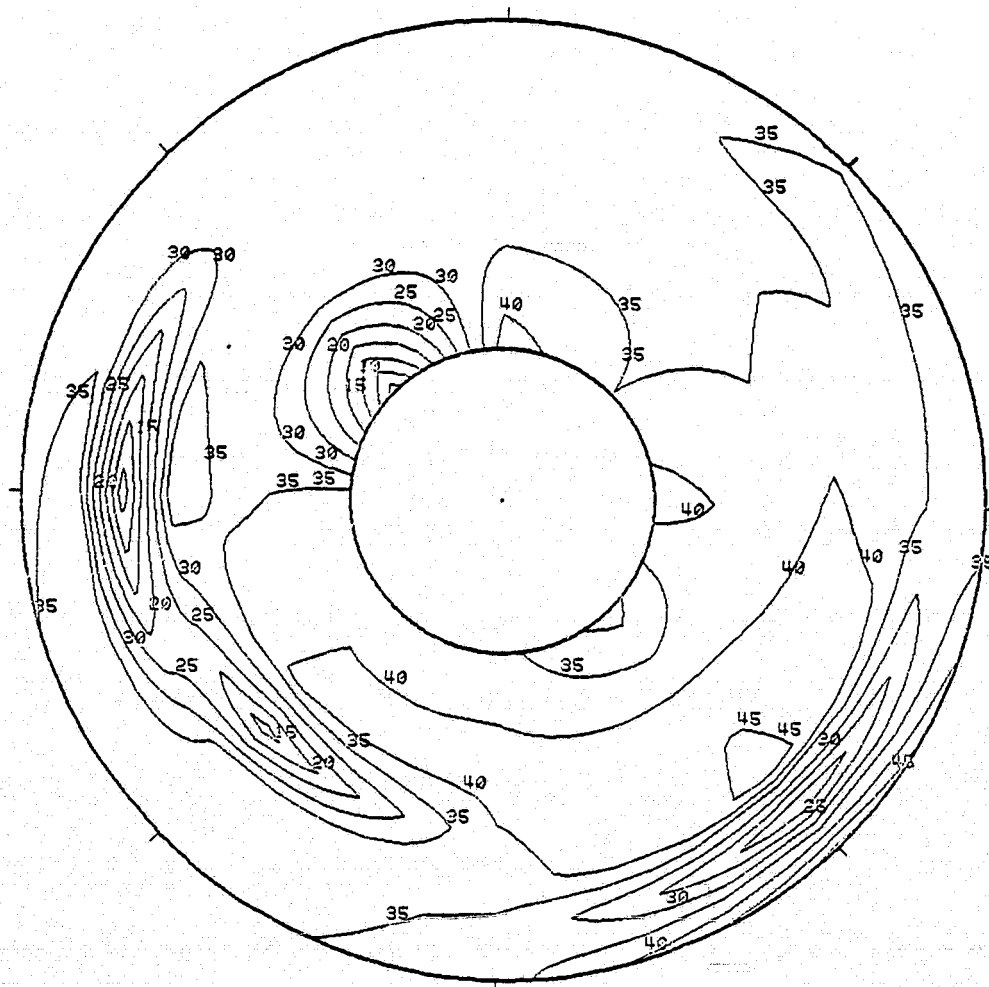
FIGURE G-69 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.3 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413/12 IDENT. 69
THE SEGMENT START TIME WAS AT 22:34:20.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 68.3%	CIVV -25.0
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69(m) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .03435

FIGURE G-69 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.3\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 413 /12 IDENT. 69
THE SEGMENT START TIME WAS AT 22:34:20.140

MACH
2.2

ALPHA
0

BETA
0

RHO
-2.0

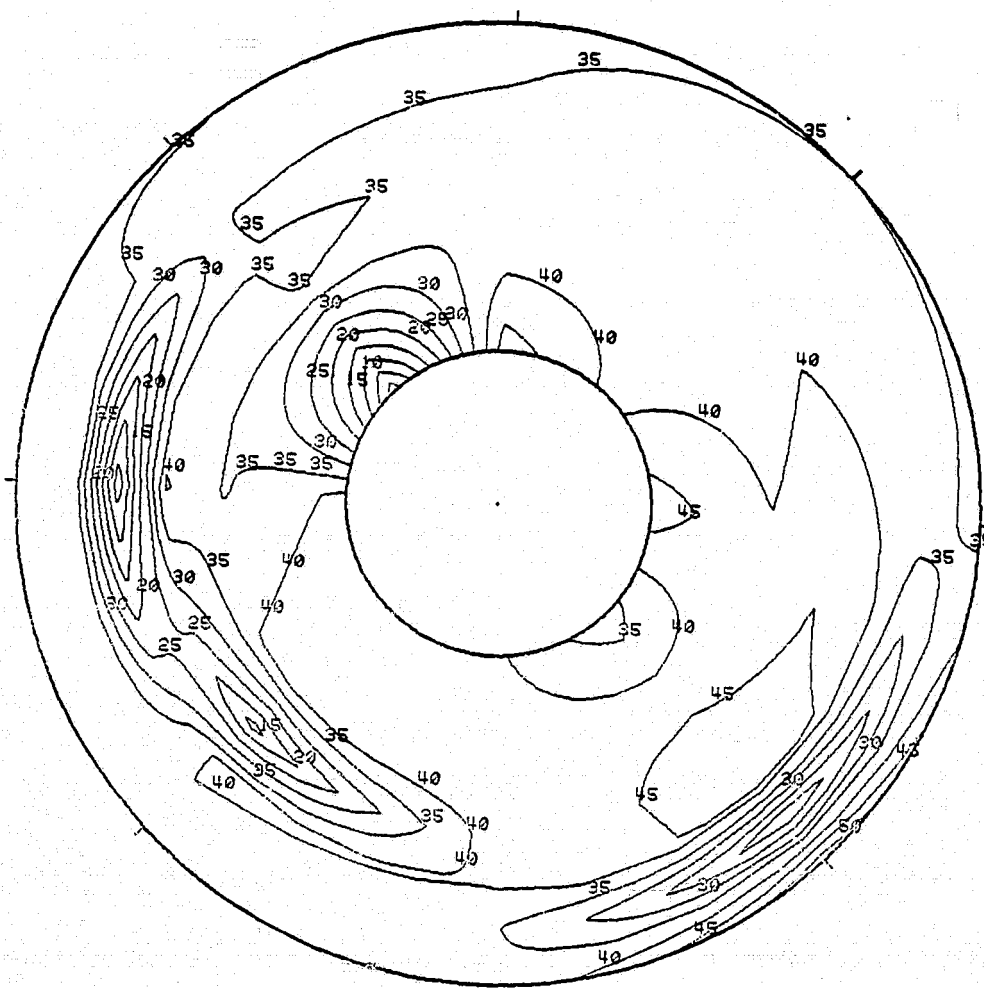
DELTA3
22.5

RYPASS
0.0

WAT2
68.3%

CIVV
-25.0

69(n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .03646

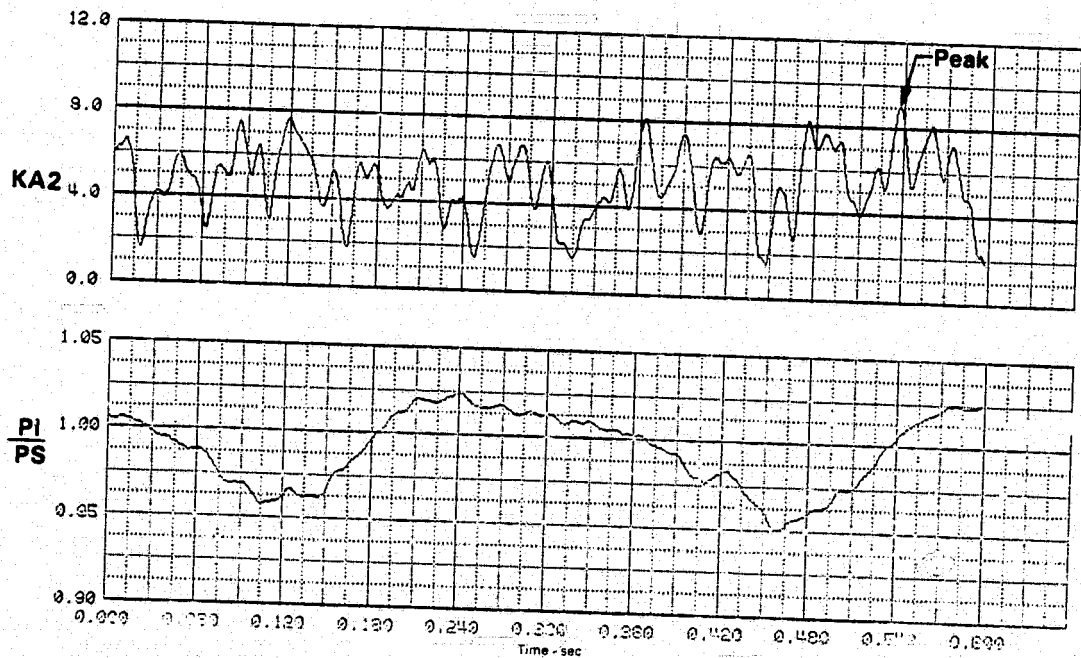
FIGURE G-69 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.3 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 /12 IDENT. 69
THE SEGMENT START TIME WAS AT 22:34:20.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 68.3%	CIVV -25.0
PI 43.05 (6.244)	PI/PS 1.001	KTHETA 0.251	KRA2 0.539	BKRA2 8.781	KA2 9.032	KC2 0.537	KOSP 0.327
							O2 0.116

69(o) Time History Plots
45 Hz



PEAK AT TIME = 0.536672 SECONDS

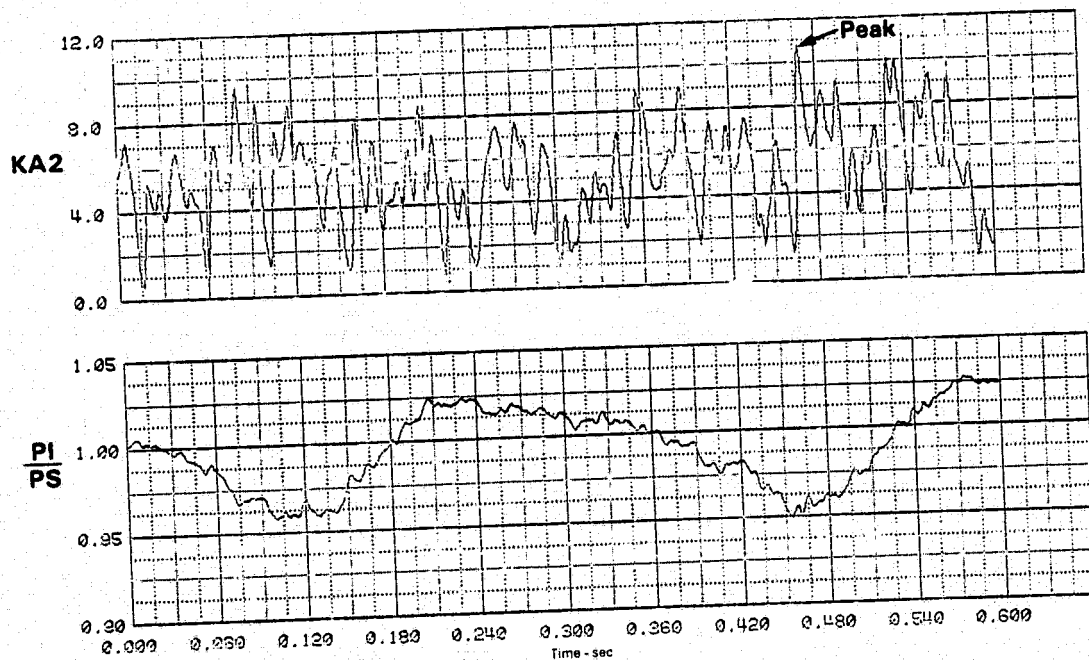
FIGURE G-69 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.3 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 /12 IDENT. 69
THE SEGMENT START TIME WAS AT 22:34:20.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DEL T83 22.5	BYPASS 0.0	WAT2 68.3%	CIVV -25.0
PI 41.10 (5.981)	PI/PS 0.956	KTHETA 0.514	KRA2 0.622	BKRA2 10.133	KA2 10.746	KC2 0.630	KOSP 0.849
							D2 0.137

69(p) Time History Plots
100 Hz



PEAK AT TIME = 0.468506 SECONDS

FIGURE G-69 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.3 %

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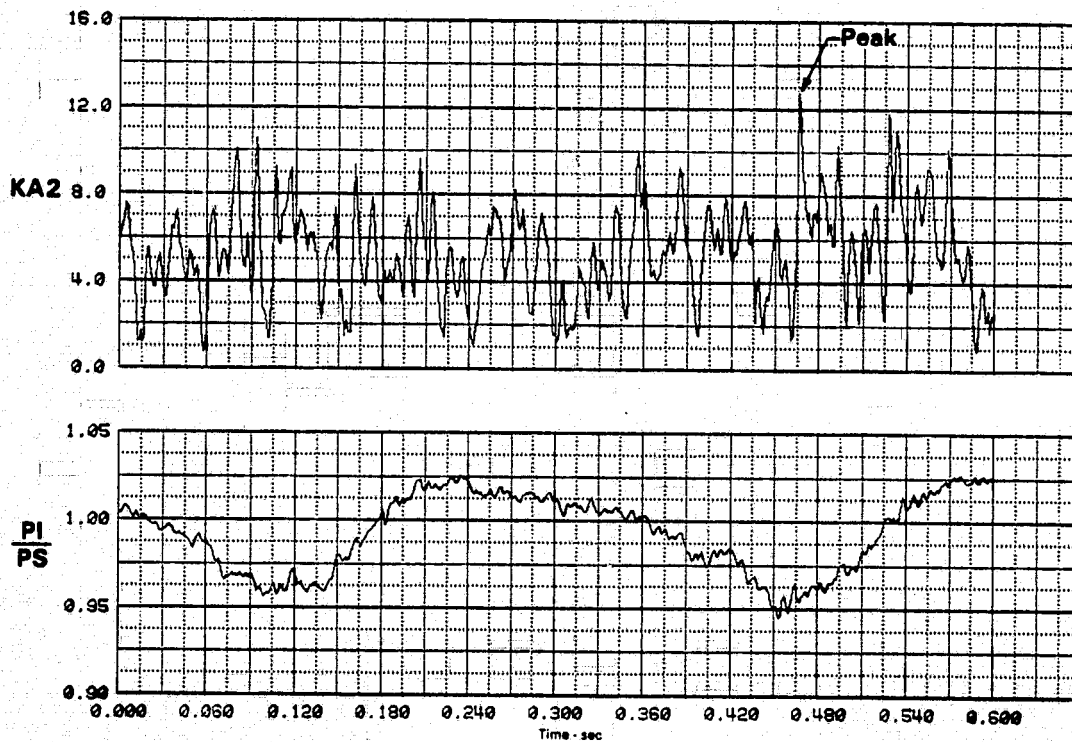
FSCP - NASA DATA STUDY

DATA PART/POINT 413 /12 IDENT. 69

THE SEGMENT START TIME WAS AT 22:34:20.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 68.3%	CIVV -25.0
P1 41.09 (5.960)	PI/PS 0.956	KTHETA 0.729	KRA2 0.737	BKRA2 12.016	KA2 12.745	KC2 0.730	KOSP 0.998
							D2 0.200

69(q) Time History Plots 170 Hz



PEAK AT TIME = 0.466342 SECONDS

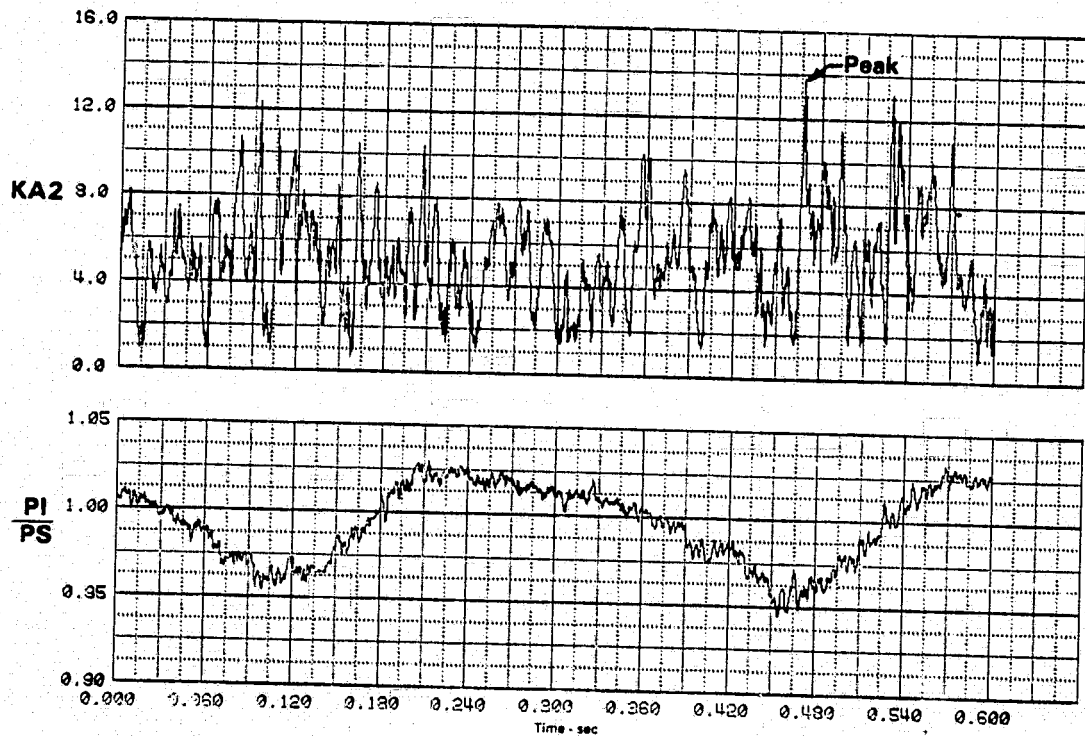
FIGURE G-69 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.3$ %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 /12 IDENT. 69
THE SEGMENT START TIME WAS AT 22:34:20.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 68.3%	CIVV -25.0
P1 41.20 (9.975)	P1/PS 0.958	KTHETA 0.808	KRA2 0.799	BKRA2 13.922	KA2 13.329	KC2 0.887	KOSP 1.066
							Q2 6.240

69(r) Time History Plots
500 Hz



PEAK AT TIME = 0.467475 SECONDS

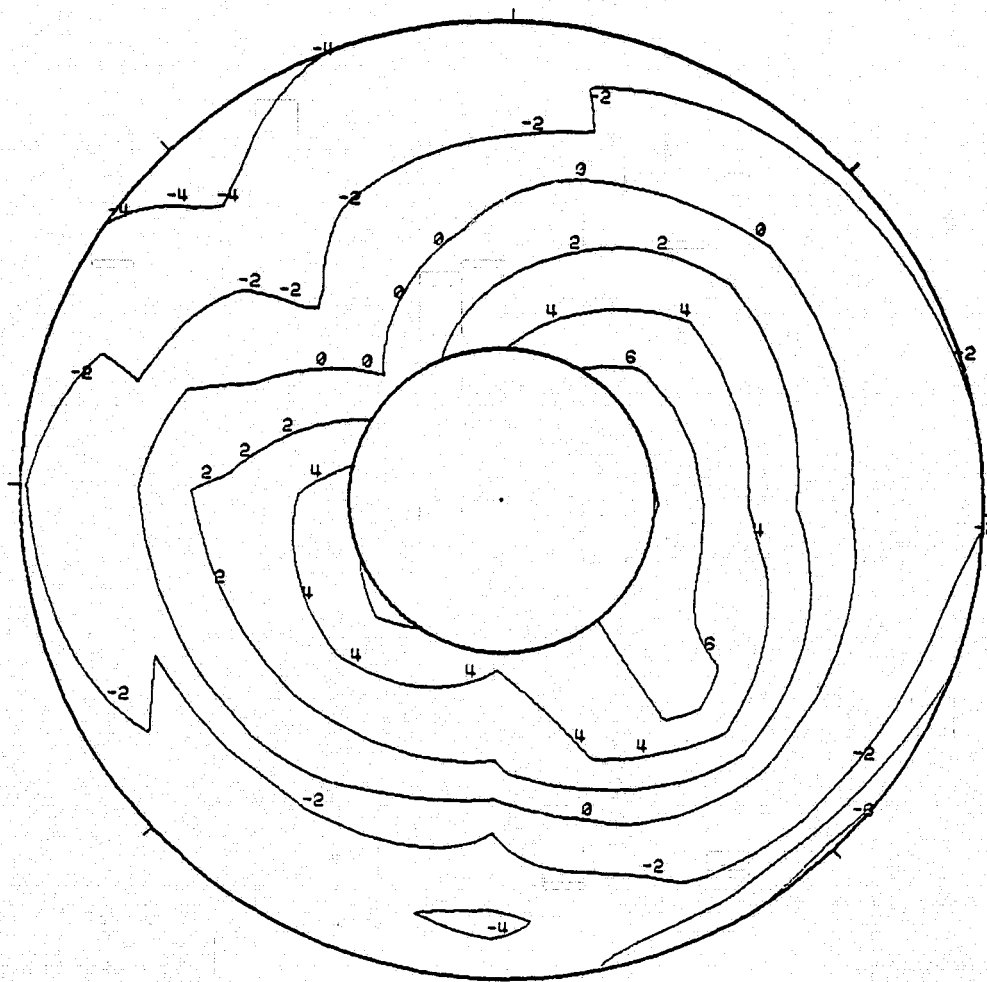
FIGURE G-69 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.3 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 /12 IDENT. 69
THE SEGMENT START TIME WAS AT 22:34:20.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DEL T A3 22.5	BYPASS 0.0	WAT2 68.3%	CIVV -25.0
PI 43.05 (6.244)	PI/PS 1.001	KTHETA 0.251	KRA2 0.539	BKRA2 8.781	KA2 9.032	KC2 0.537	KOSP 0.327
							D2 0.116

69(a) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz



MEAN FACE PRESSURE = 43.05 kPa (6.244 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.536672 SECONDS

FIGURE G-69 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.3 %

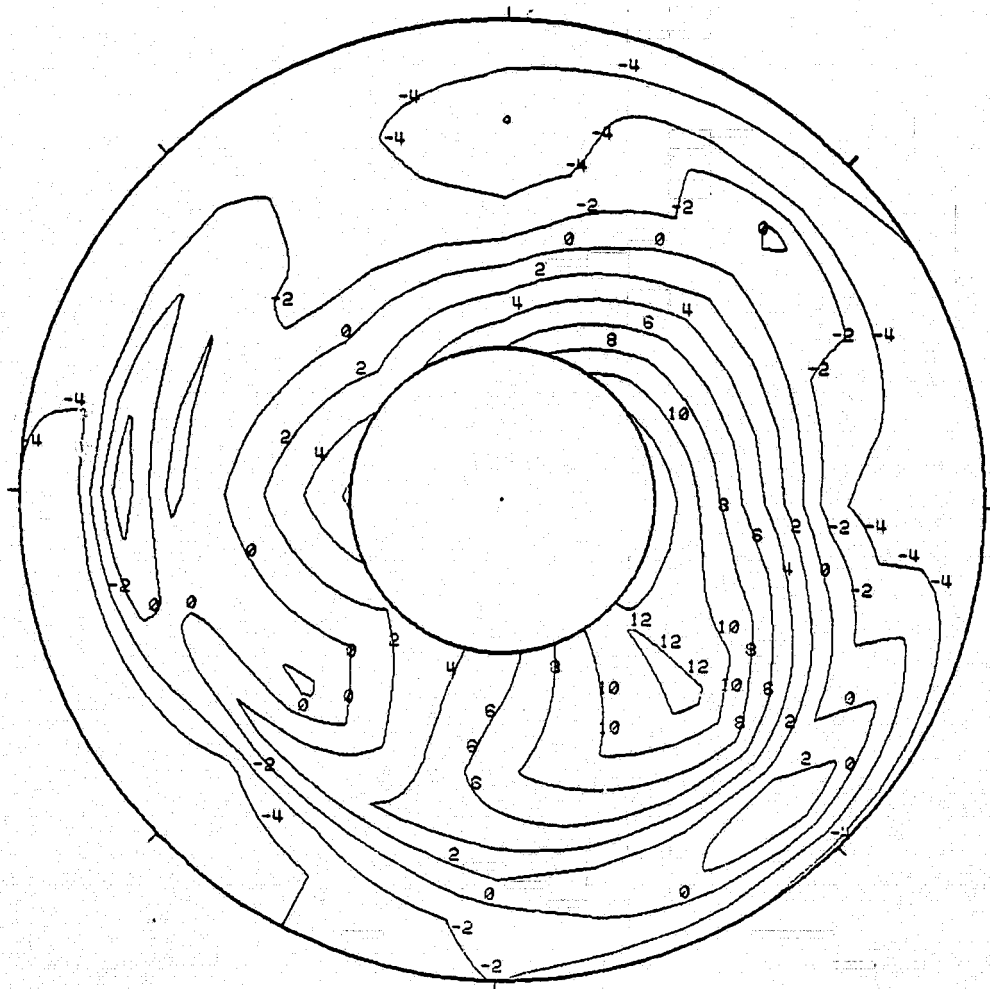
FSCP - NASA DATA STUDY

DATA PART/POINT 413/12 IDENT. 69

THE SEGMENT START TIME WAS AT 22:34:20.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 68.3%	CIVV -25.0
P1 41.10 (5.961)	P1/PS 0.956	KTHETA 0.614	KRA2 0.622	BKRA2 10.133	KA2 10.746	KC2 0.690	KOSP 0.849
							D2 0.187

69(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz



MEAN FACE PRESSURE = 41.10 kPa (5.961 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.468506 SECONDS

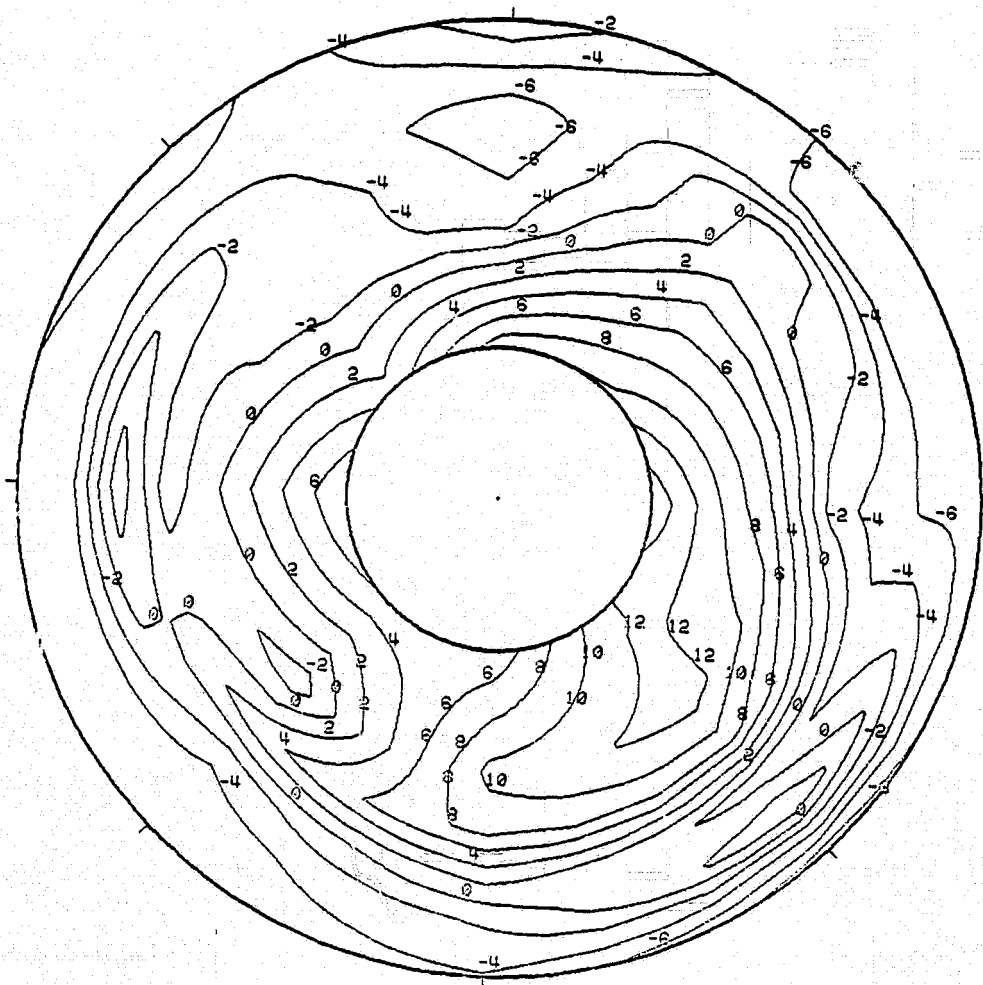
FIGURE G-69 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.3 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 /12 IDENT. 00
THE SEGMENT START TIME WAS AT 22:34:23.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 68.3%	CIVV -25.0
P1 41.09 (5.960)	P1/PS 0.956	KTHETA 0.729	KRA2 0.737	BKRA2 12.016	KA2 12.745	KC2 0.790	KOSP 0.998
							D2 0.209

69(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 41.09 kPa (5.960 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.466342 SECONDS

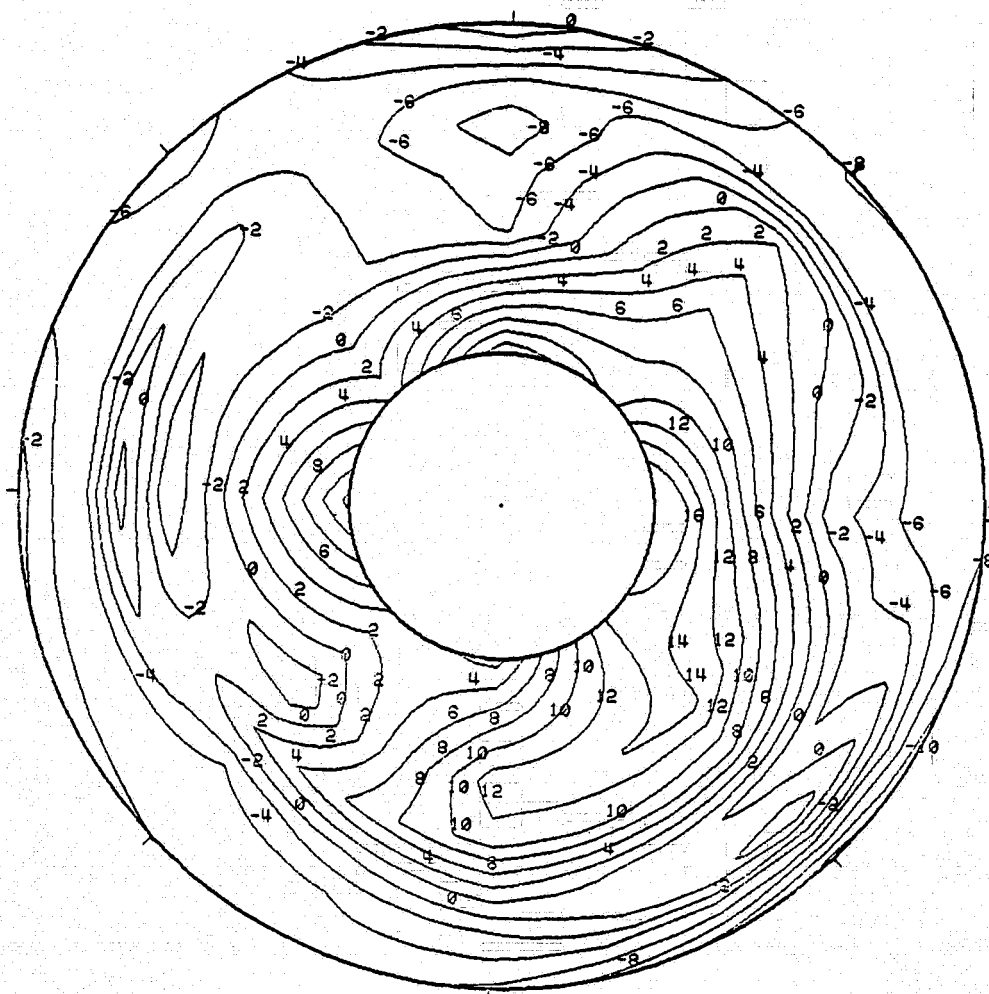
FIGURE G-69 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.3 %

FSCP - NASA DATA STUDY

DATA PART/POINT 413 /12 IDENT. 88
THE SEGMENT START TIME WAS AT 22:34:20.140

MACH 2.2	ALPHA 0	BETA 0	RHO -2.0	DELTA3 22.5	BYPASS 0.0	WAT2 68.3%	CIVV -25.0
PI 41.20 (5.975)	PI/PS 0.958	KTHETA 0.808	KRA2 0.799	BKRA2 13.022	KA2 13.329	KC2 0.887	KOSP 1.066
							D2 0.240

69(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz

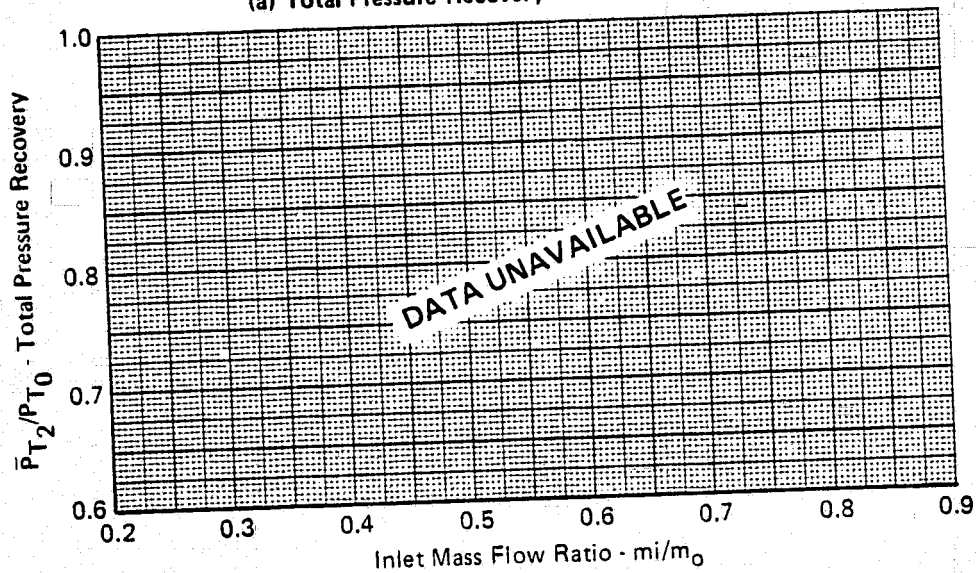


MEAN FACE PRESSURE = 41.20 kPa (5.975 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.467475 SECONDS

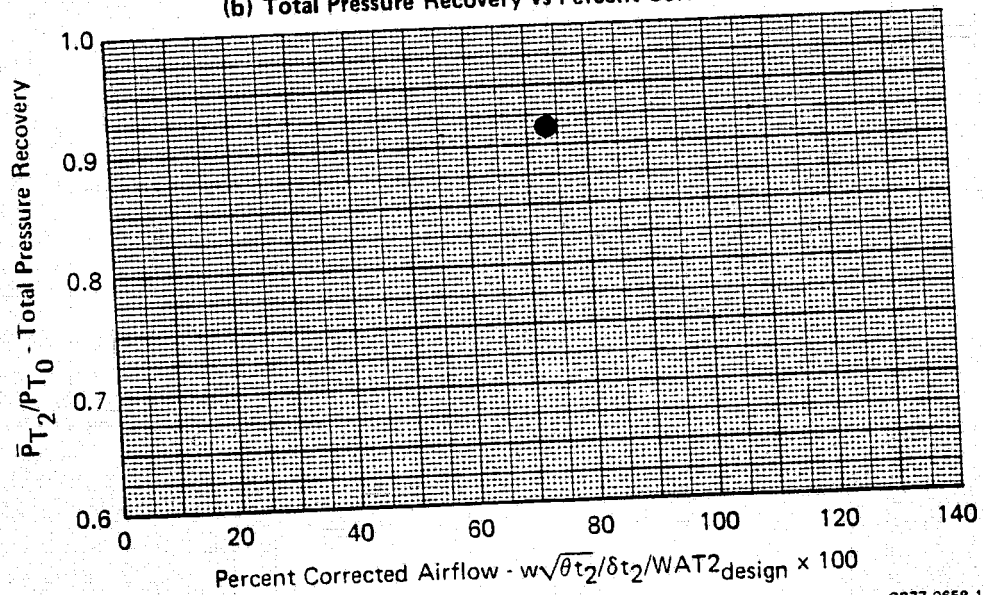
FIGURE G-69 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.3 %

FLIGHT - NASA Data Study
 Part/Point - 425/1, Ident 70
 RHO DELTA3 BYPASS CIVV
 -2.2 22.9 0.0 -25.00

(a) Total Pressure Recovery vs Inlet Mass Flow Ratio



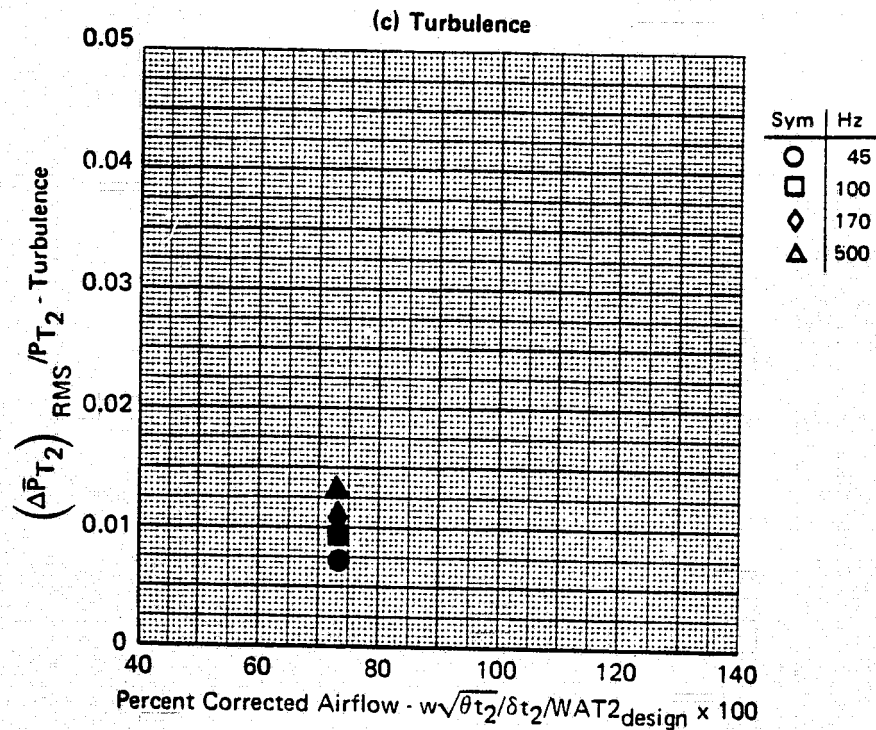
(b) Total Pressure Recovery vs Percent Corrected Airflow



GP77-0658-1

FIGURE G-70
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = 0.1, \beta = 0.2, WAT2 = 73.0 \%$

FLIGHT - NASA Data Study
 Part/Point - 425/1, Ident 70
 RHO DELTA3 BYPASS CIVV
 -2.2 22.9 0.0 -25.00



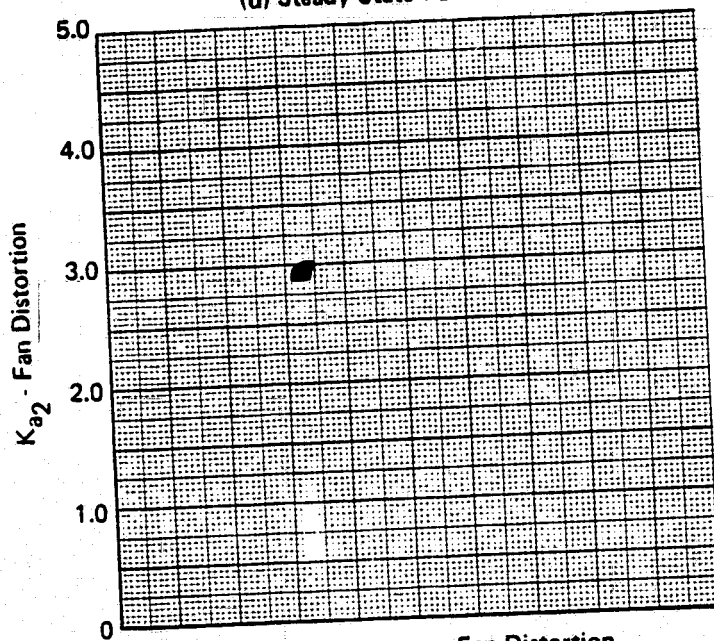
GP77-0658-5

FIGURE G-70 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.1$, $\beta = 0.2$, $WAT2 = 73.0\%$

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FLIGHT - NASA Data Study
 Part/Point - 425/1, Ident 70
 RHO DELTA3 BYPASS CIVV
 -2.2 22.9 0.0 -25.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion

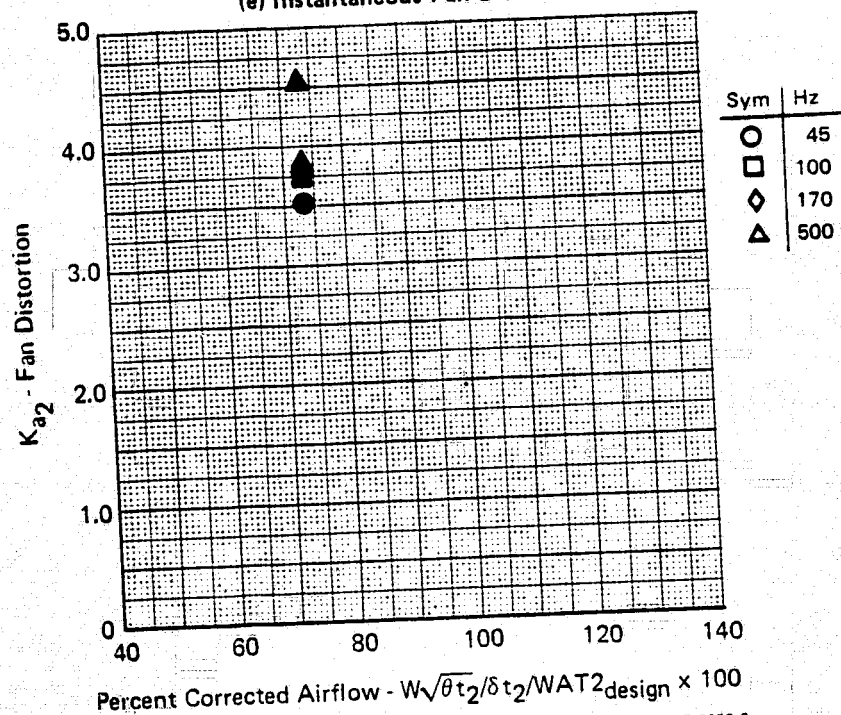
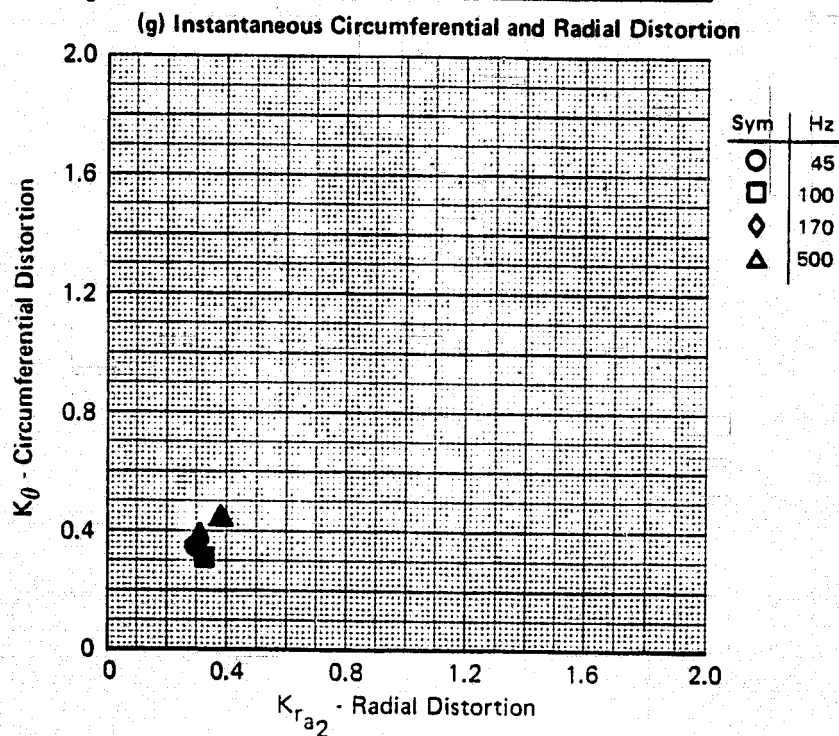
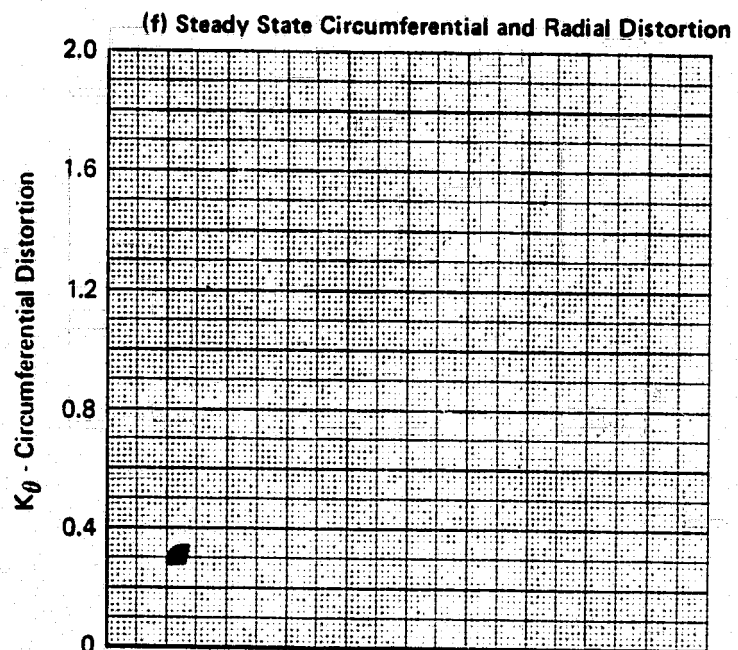


FIGURE G-70 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.1$, $\beta = 0.2$, $WAT2 = 73.0\%$

FLIGHT - NASA Data Study
 Part/Point - 425/1, Ident 70
 RHO DELTA3 BYPASS CIVV
 -2.2 22.9 0.0 -25.00



GP77-0658-2

FIGURE G-70 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.1$, $\beta = 0.2$, WAT2 = 73.0 %

FLIGHT - NASA Data Study
 Part Point - 425/1, Ident 70
 RHO DELTA3 BYPASS CIVV
 -2.2 22.9 0.0 -25.00

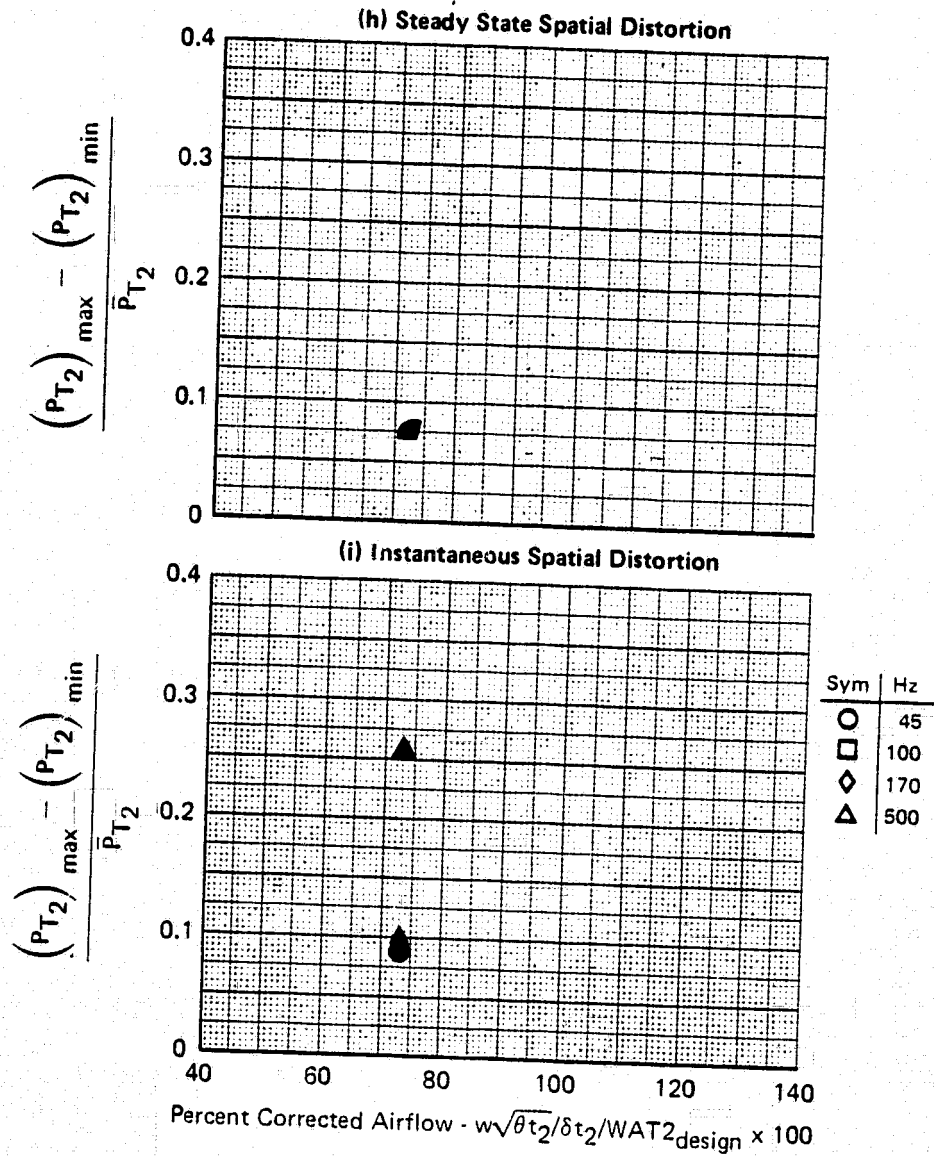


FIGURE G-70 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 0.1$, $\beta = 0.2$, $WAT2 = 73.0\%$

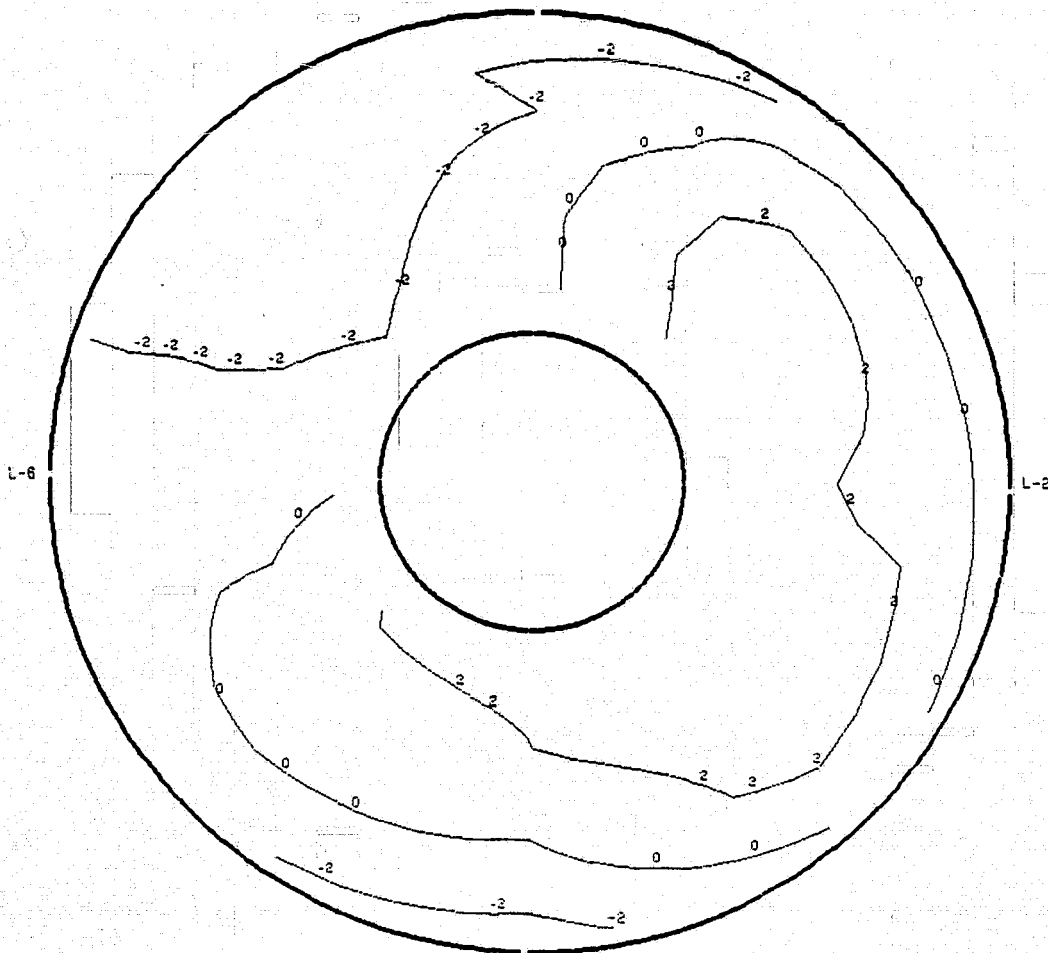
GP77-0658-4

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/1 IDENT. 70
THE SEGMENT START TIME WAS AT 05:09:55.941

MACH 2.2	ALPHA 0.1	BETA 0.2	ALT 16522(54207)	RHO -2.2	DELTA3 22.9	BYPASS 0.0	WAT2 73.0%	CIVV -25.00
PI 92.00 (13.343)	PI/PS 1.0	KTHETA .2960	KRA2 .2400	BKRA2 2.6484	KA2 2.9278	KC2 .2941	KOSP —	D2 .0729

70 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 92.00 kPa (13.343 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

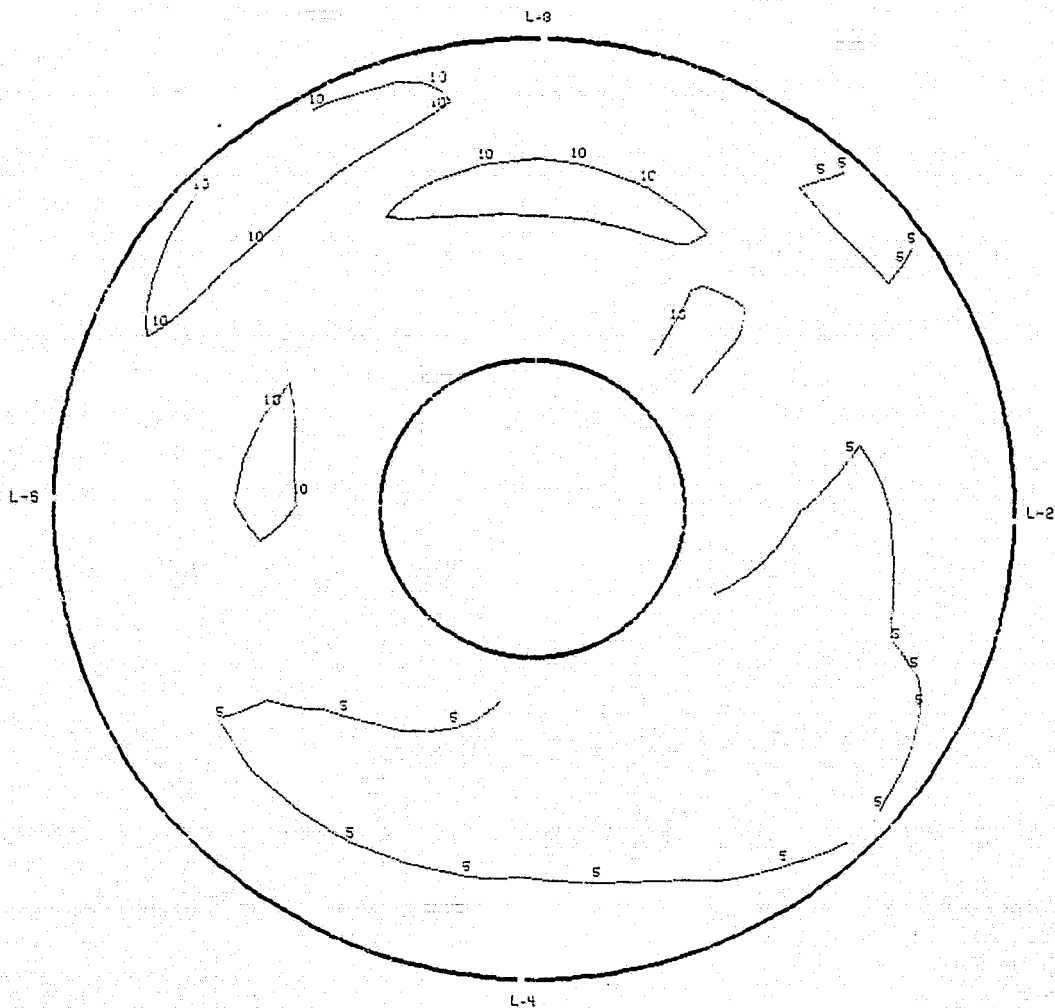
FIGURE G-70 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.1$, $\beta = 0.2$, WAT2 = 73.0 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/1 IDENT. 70
THE SEGMENT START TIME WAS AT 05:09:58.941

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.20	0.3	0.2	16522 (54207)	-2.2	22.9	0.0	73.0%	-25.00

70 (k) Turbulence Contour
45 Hz



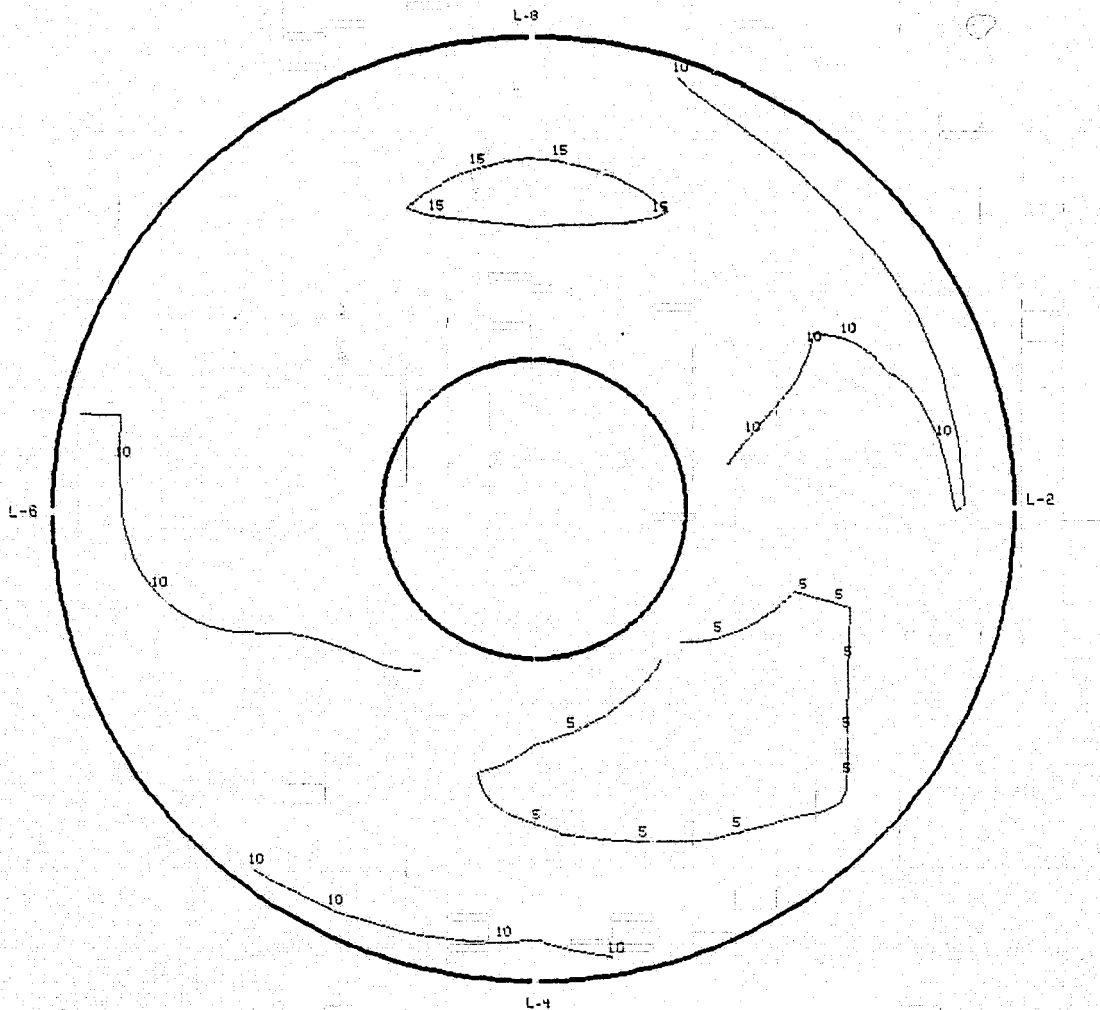
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0071
FIGURE G-70 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.20$, $\alpha = 0.1$, $\beta = 0.2$, WAT2 = 73.0 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 428/1 IDENT. 70
THE SEGMENT START TIME WAS AT 05:09:58.941

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.20	0.1	0.2	16522 (84207)	-2.2	22.9	0.0	73.0%	-25.00

70 (I) Turbulence Contour
100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0095

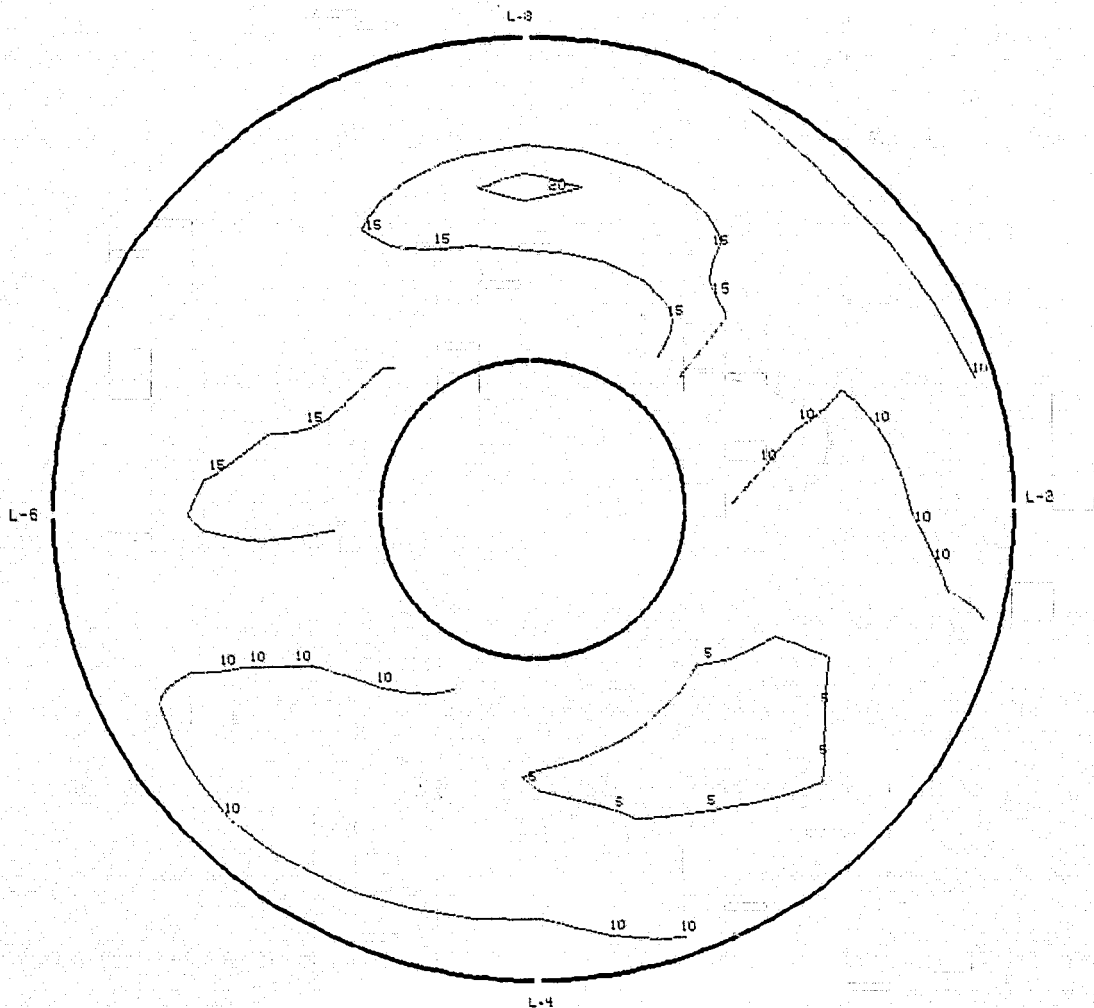
FIGURE G-70 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.20$, $\alpha = 0.1$, $\beta = 0.2$, WAT2 = 73.0 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/1 IDENT. 70
THE SEGMENT START TIME WAS AT 05:09:58.941

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.2	0.1	0.2	16522(54207)	-2.2	22.9	0.0	73.0%	-25.00

70(m) Turbulence Contour
170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0108

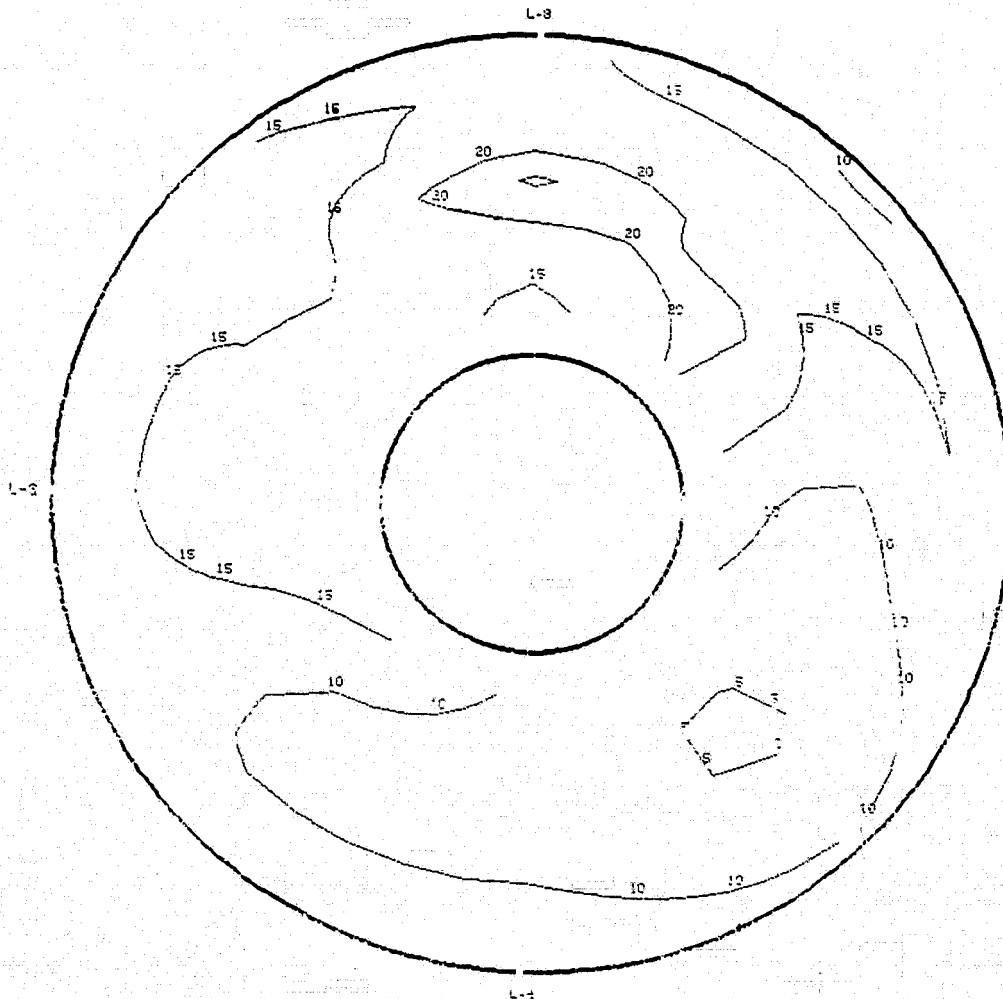
FIGURE G-70 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.1$, $\beta = 0.2$, WAT2 = 73.0 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/1 IDENT. 70
THE SEGMENT START TIME WAS AT 08: 09: 58.941

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.20	0.5	0.4	16522 (54207)	-2.2	22.9	0.0	73.0%	-25.00

70 (n) Turbulence Contour
500 Hz



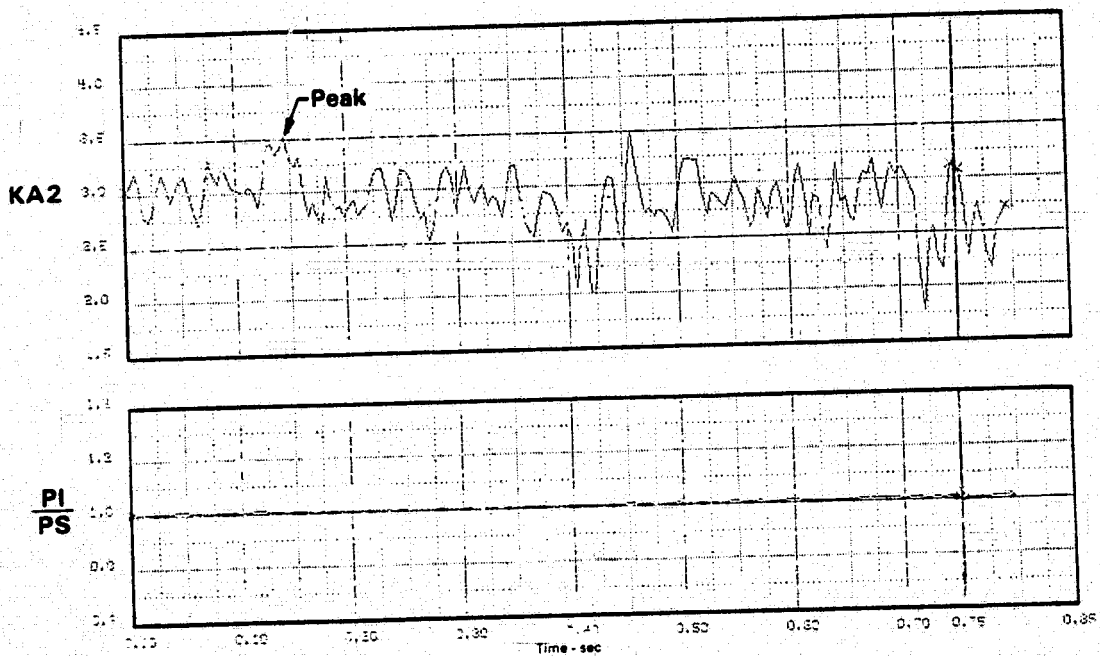
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = 0.0131
FIGURE G-70 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.20$, $\alpha = 0.1$, $\beta = 0.2$, WAT2 = 73.0 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/1 IDENT. 70
THE SEGMENT START TIME WAS AT 05:09: 58.941

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.20	0.3	0.2	16530 (54232)	-2.2	22.9	0.0	73.0%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
92.05 (13.35)	1.0056	0.3584	0.2889	3.1649	3.5232	0.5966	0.3437	0.0886

70(o) Time History Plots
45 Hz



PEAK AT TIME = 0.1483 SECONDS

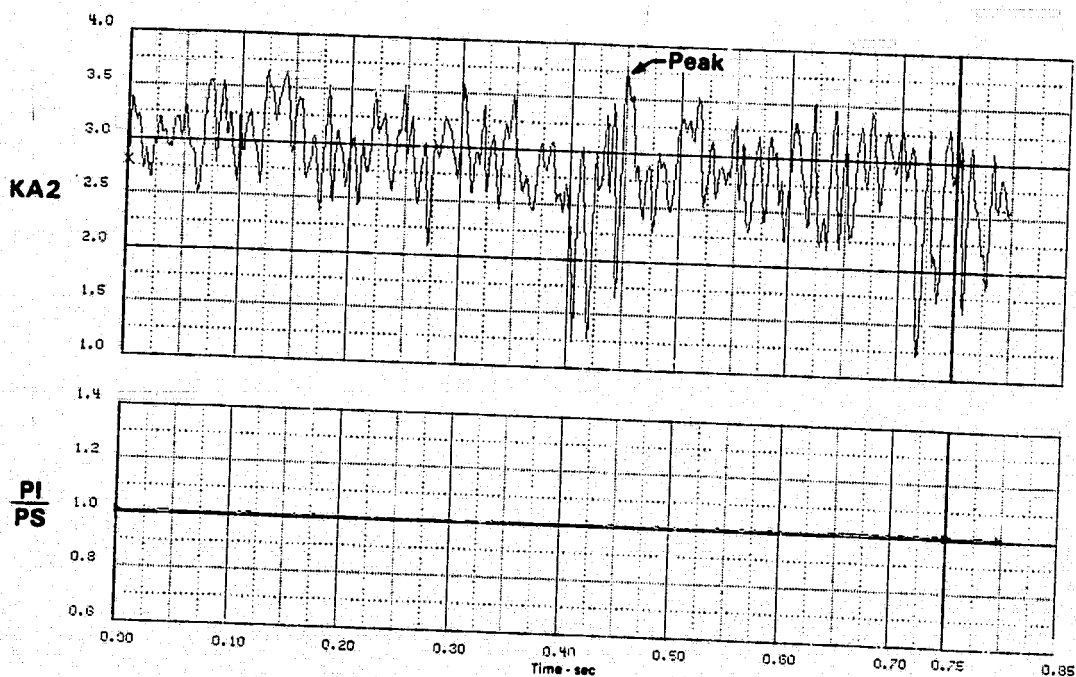
FIGURE G-70 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR ORIGINAL PAGE IS
 $M_0 = 2.20$, $\alpha = 0.1$, $\beta = 0.2$, $WAT2 = 73.0\%$ POOR QUALITY

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/1 IDENT. 70
THE SEGMENT START TIME WAS AT 05:09: 58.941

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.20	0.1	0.2	16523 (54208)	-2.2	22.9	0.0	73.0%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
92.39 (13.40)	1.0093	0.3106	0.3165	3.4685	3.7785	0.6923	0.3096	0.0066

70(p) Time History Plots
100 Hz



PEAK AT TIME = 0.45039 SECONDS

FIGURE G-70 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.20$, $\alpha = 0.1$, $\beta = 0.2$, $WAT2 = 73.0\%$

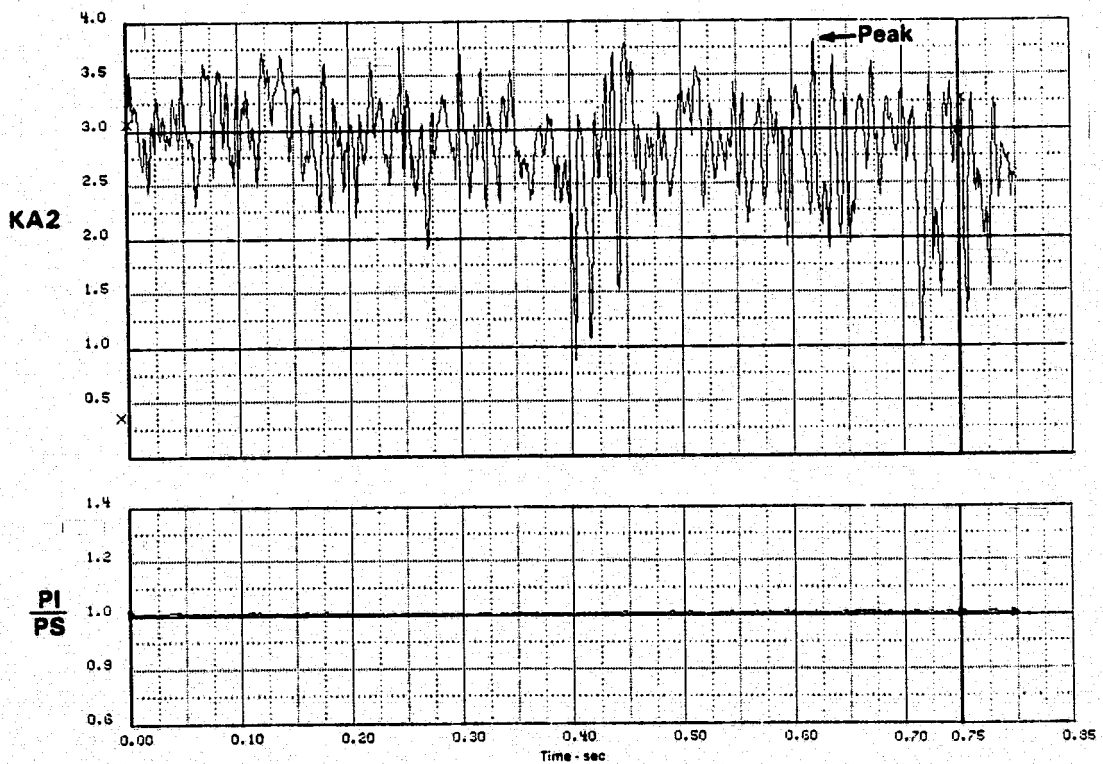
ORIGINAL PAGE IS
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FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/1 IDENT. 70
THE SEGMENT START TIME WAS AT 05:09:58.941

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.2	0.1	0.2	16513(54176)	-2.2	22.9	0.0	73.0%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
92.25(13.380)	1.0078	.3741	.3117	3.4396	.38143	.7172	.4191	.0959

70(q) Time History Plots
170 Hz



PEAK AT TIME = 0.62022 SECONDS

FIGURE G-70 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.1$, $\beta = 0.2$, WAT2 = 73.0

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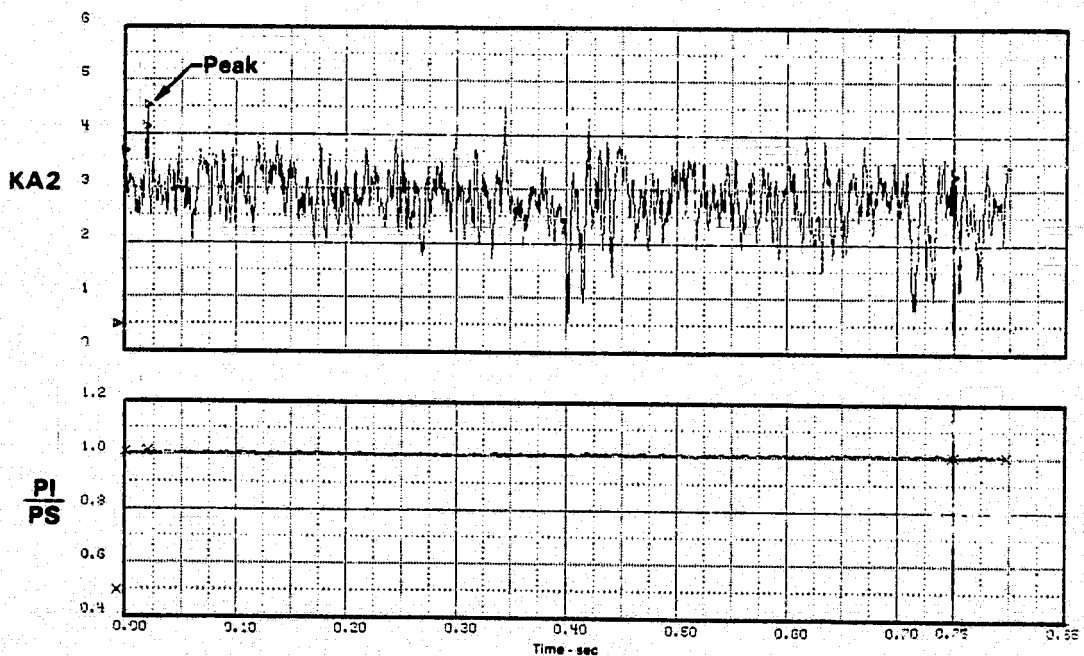
FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/1 IDENT. 70
THE SEGMENT START TIME WAS AT 05: 09:58.941

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.2	0.5	0.4	16534 (54246)	-2.2	22.9	0.0	73.0%	25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	WAT2	D2
92.78 (13.456)	1.0144	0.4395	0.3789	4.0917	4.8306	0.730	0.5000	0.2589

ORIGINAL PAGE 13
OF FOUR

70(r) Time History Plots
500 Hz



PEAK AT TIME = 0.01944 SECONDS

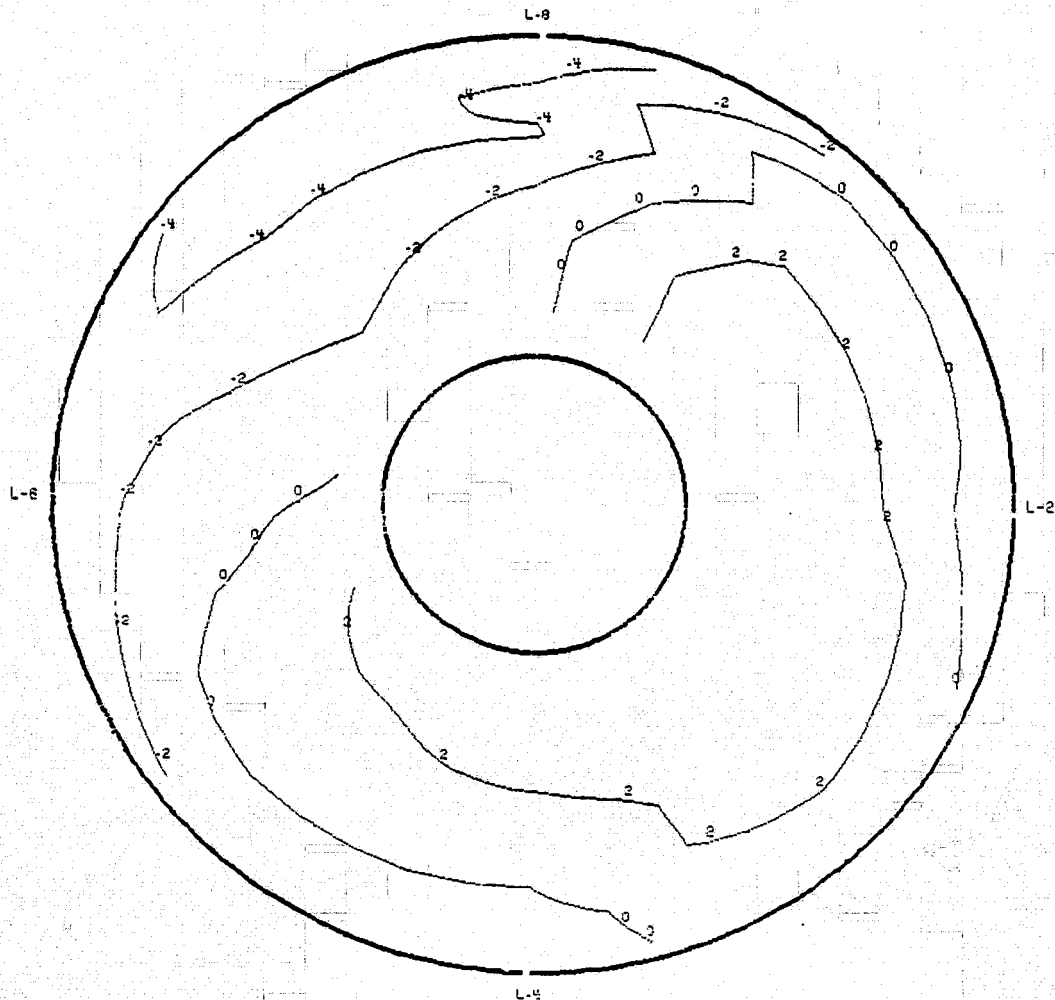
FIGURE G-70 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.20$, $\alpha = 0.1$, $\beta = 0.2$, WAT2 = 73.0 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/1 IDENT. 70
THE SEGMENT START TIME WAS AT 06:09: 58.941

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.20	0.3	0.2	16630 (54232)	-2.2	22.9	0.0	73.0%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
92.05 (13.35)	1.0056	0.3584	0.2889	3.1649	3.5232	0.5966	0.3437	0.0586

70(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz



MEAN FACE PRESSURE = 92.05 kPa (13.35 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.14483 SECONDS

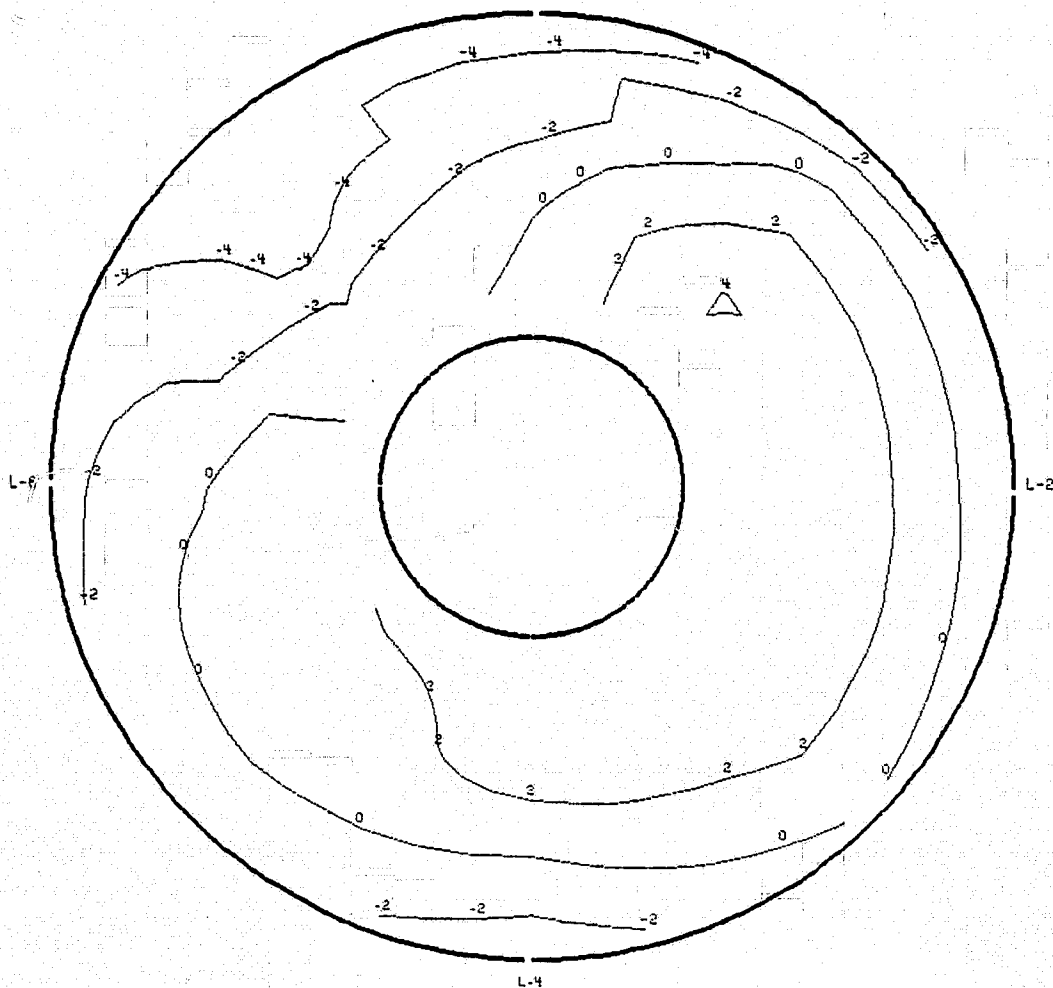
FIGURE G-70 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.20$, $\alpha = 0.1$, $\beta = 0.2$, $WAT2 = 73.0\%$

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/1 IDENT. 70
THE SEGMENT START TIME WAS AT 05:09:58.941

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.20	0.1	0.2	16423 (54208)	-2.2	22.9	0.0	73.0%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KOSP	D2
92.39 (13.40)	1.0093	0.5501	0.3165	3.4685	3.7785	0.6923	0.3096	0.0965

70 (t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz



MEAN FACE PRESSURE = 92.39 kPa (13.40 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.45039 SECONDS

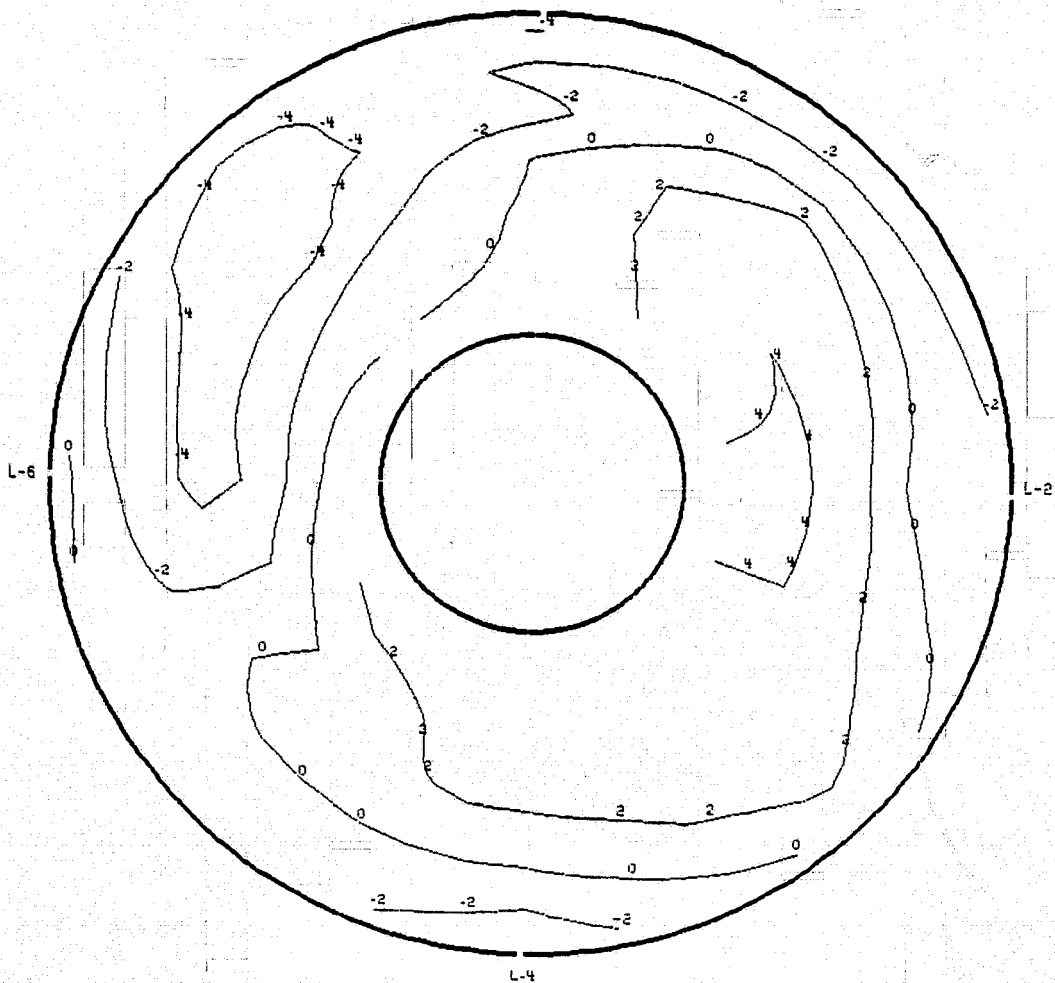
FIGURE G-70 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.20$, $\alpha = 0.1$, $\beta = 0.2$, WAT2 = 73.0 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/1 IDENT. 70
THE SEGMENT START TIME WAS AT 05:09:58.941

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.2	0.1	0.2	16513(54176)	-2.2	22.9	0.0	73.0%	-25.00
PI	PI/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KQSP	D2
92.25(13.380)	1.0078	.3741	.3117	.3.4396	.38143	.7172	.4191	.0959

70(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 92.25 kPa (13.380 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.62022 SECONDS

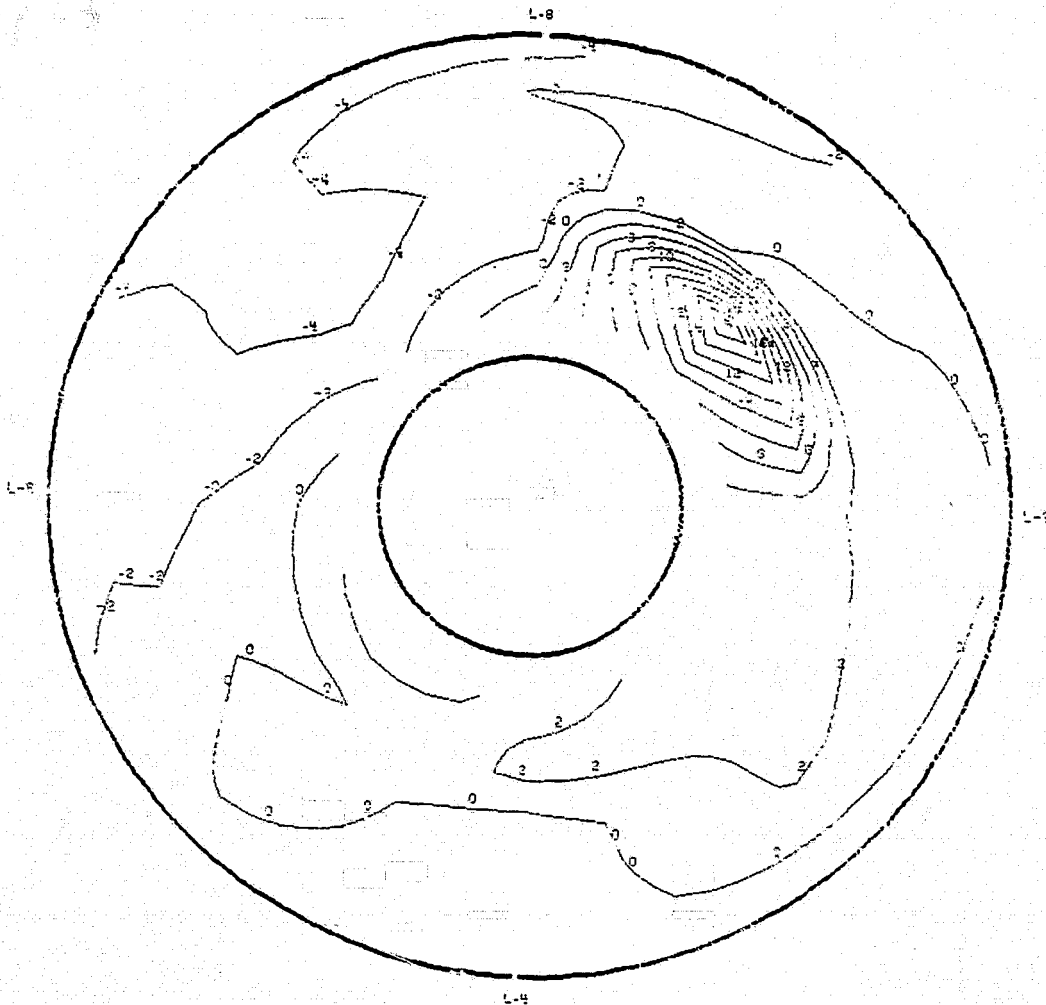
FIGURE G-70 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 0.1$, $\beta = 0.2$, WAT2 = 73.0 %

FLIGHT - NASA DATA STUDY

DATA FLIGHT/RUN 425/1 IDENT. 70
THE SEGMENT START TIME WAS AT 05:09:58.941

MACH	ALPHA	BETA	ALT	RHO	DELTA3	BYPASS	WAT2	CIVV
2.2	0.5	0.4	16534 (54246)	-2.2	22.9	0.0	73.0%	-25.00
PI	PI/PS	KTHETA	KRA2	SKRA2	KA2	KC2	KOSP	D2
92.78 (13.456)	1.0144	0.4395	0.3789	4.0917	4.5306	0.7342	0.5069	0.2568

70 (v) Instantaneous Total Pressure Contour at Peak Instantaneous Ka_2
500 Hz



MEAN FACE PRESSURE = 92.78 kPa (13.456 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.01944 SECONDS

FIGURE G-70 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.20$, $\alpha = 0.1$, $\beta = 0.2$, WAT2 = 73.0 %

FSCP - NASA Data Study
 Part/Point - 382/3, Ident 71
 RHO DELTA3 BYPASS CIVV
 0.0 25.0 0.077(120.0) -25.00

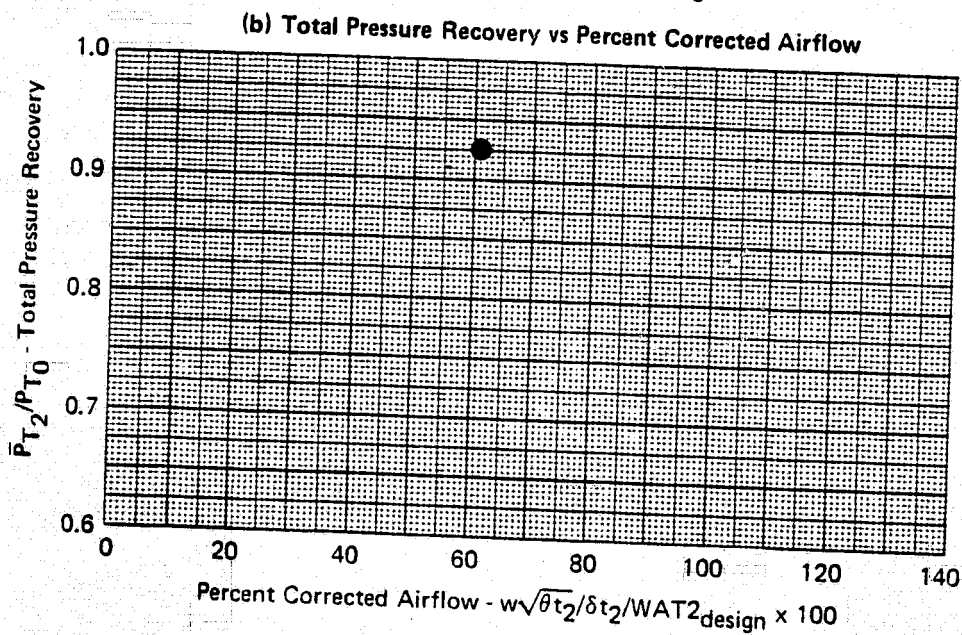
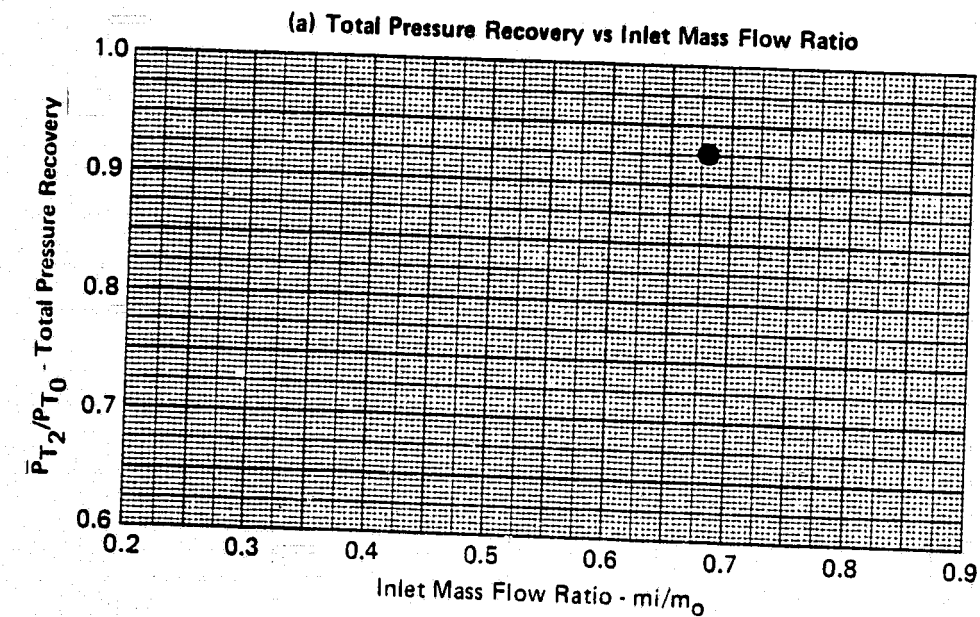
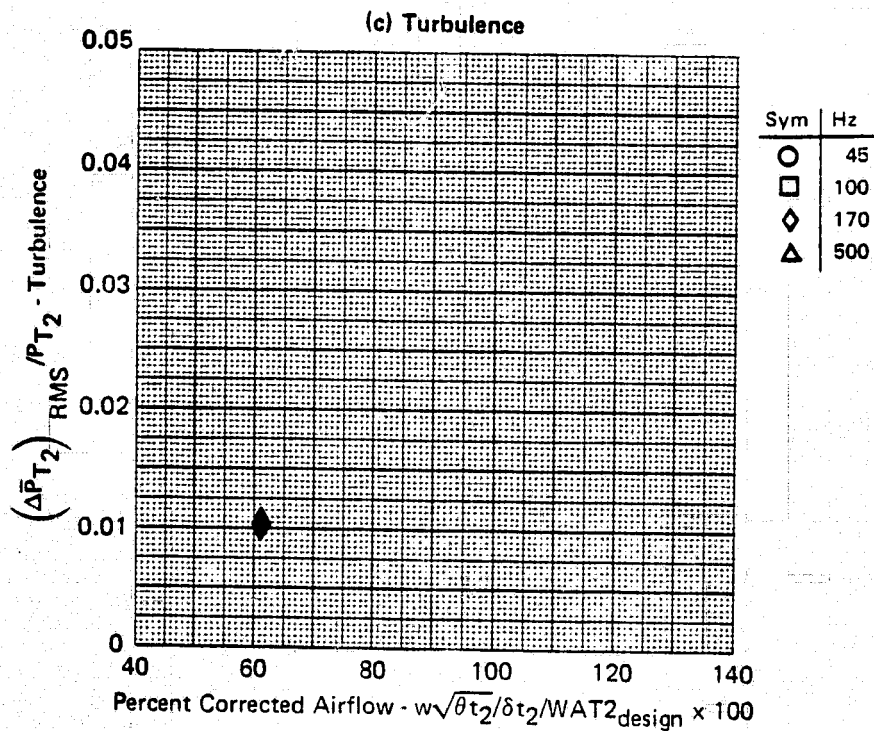


FIGURE G-71
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = 4.0, \beta = 0.0, WAT2 = 60.7 \%$

GP77-0658-1

FSCP - NASA Data Study
 Part/Point - 382/3, Ident 71
 RHO DELTA3 BYPASS CIVV
 0.0 25.0 0.077(120.0) -25.00



GP77-0658-5

FIGURE G-71 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 60.7\%$

FSCP - NASA Data Study
 Part/Point - 382/3, Ident 71
 RHO DELTA3 BYPASS CIVV
 0.0 25.0 0.077(120.0) -25.00

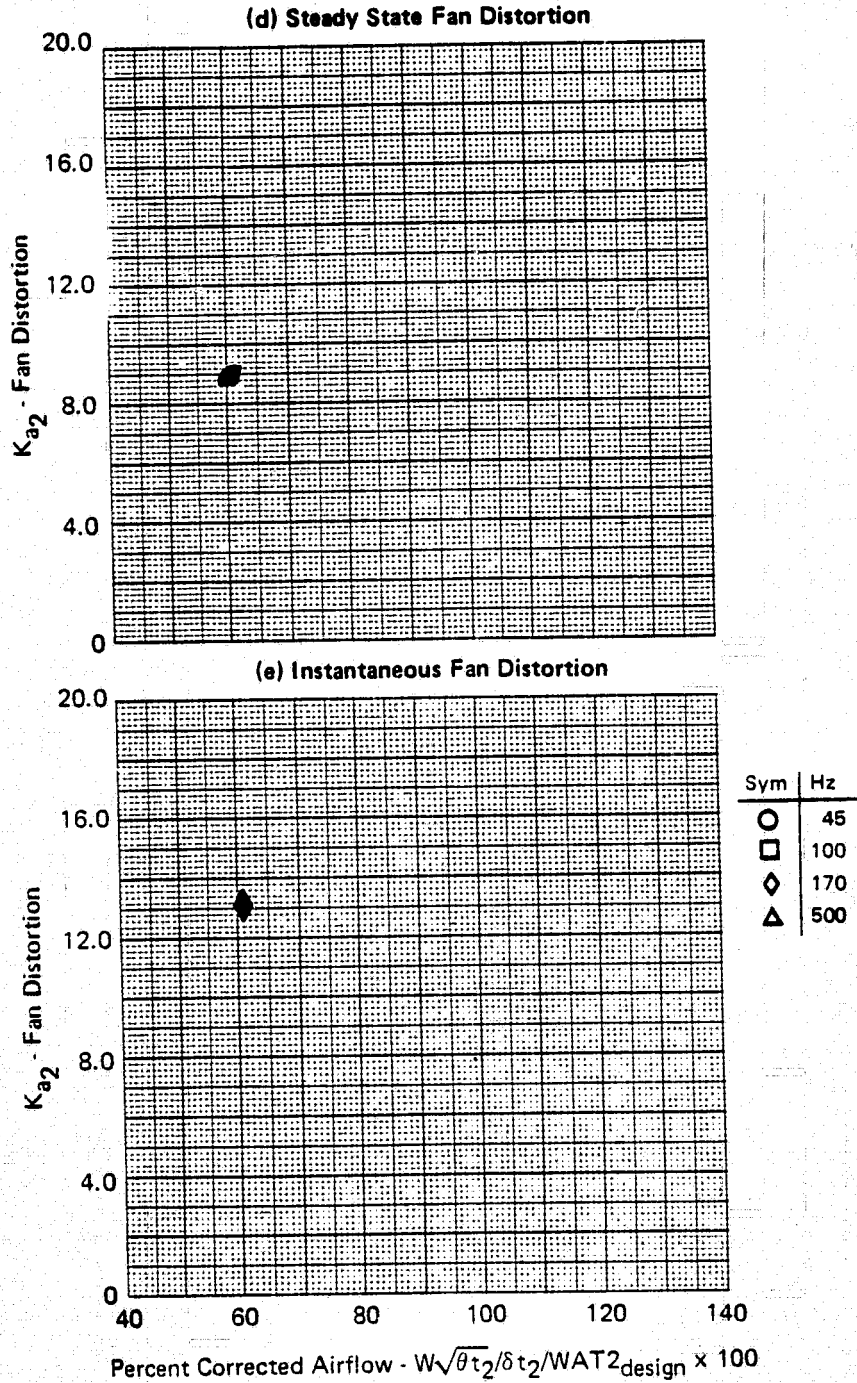


FIGURE G-71 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 60.7\%$

FSCP - NASA Data Study
 Part/Point - 382/3, Ident 71
 RHO DELTA3 BYPASS CIVV
 0.0 25.0 0.077(120.0) -25.00

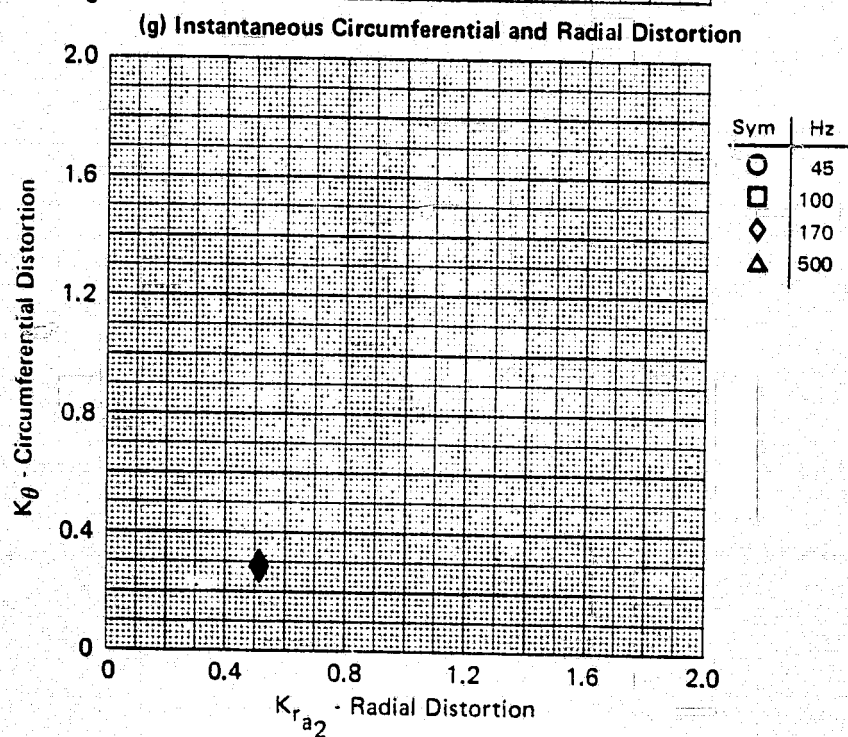
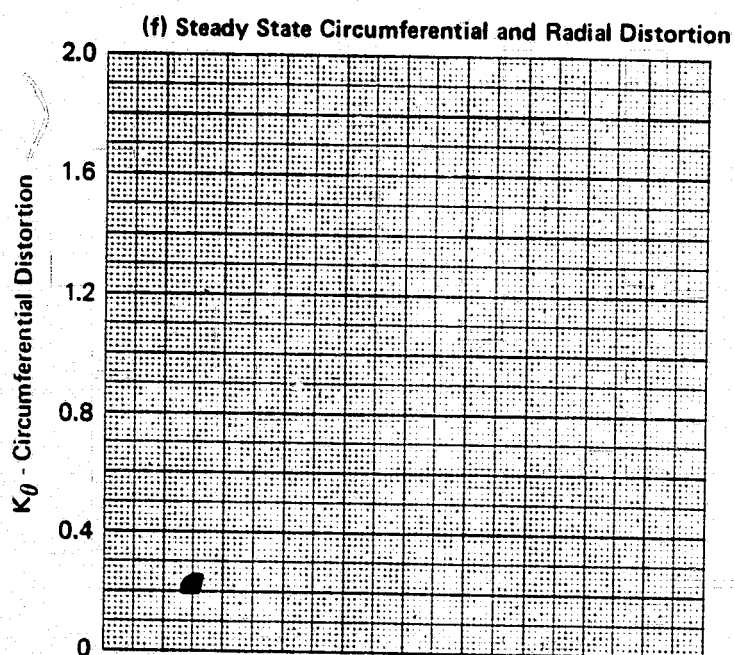
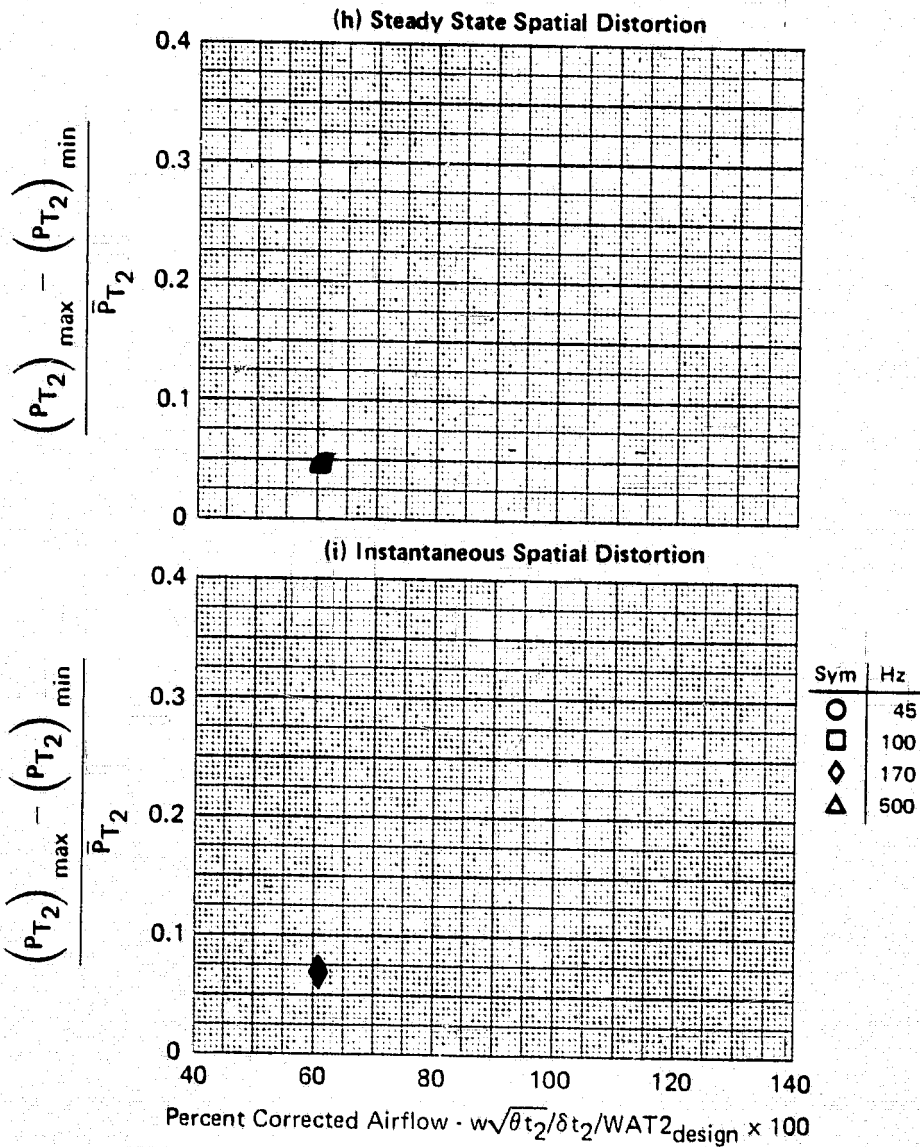


FIGURE G-71 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 60.7 %

GP77-0858-2

FSCP - NASA Data Study
Part/Point - 382/3, Ident 71

RHO DELTA3 BYPASS CIVV
0.0 25.0 0.077(120.0) -25.00



GP77-0658-4

FIGURE G-71 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 60.7\%$

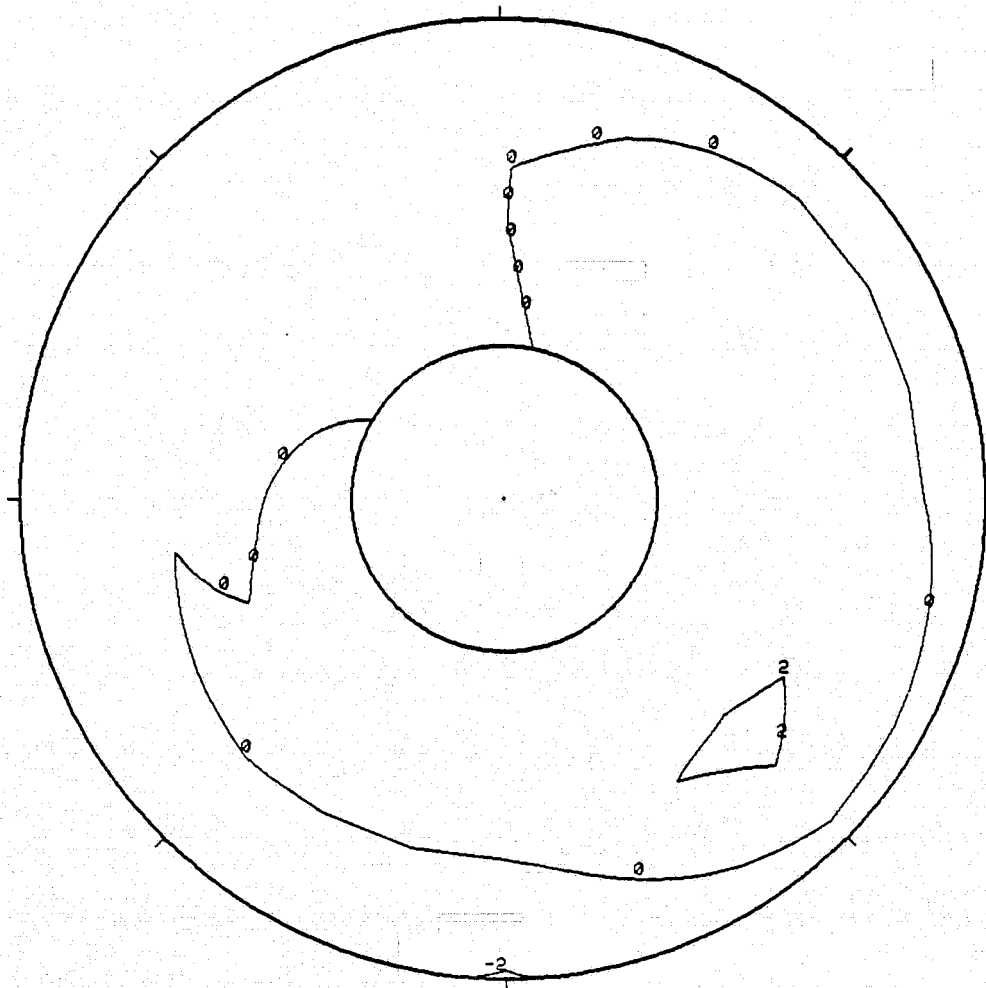
FSCP - NASA DATA STUDY

DATA PART/POINT 382 / 3 IDENT. 71
THE SEGMENT START TIME WAS AT 0:52:38.092

MACH 2.2	ALPHA 4	BETA 0	RHO 0.0	DEL TQ3 25.0	BYPASS 0.07742 (120.0)	WAT2 60.7%	CIVV -25.0
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P1	P1/PS	KTHETA	KRA2	BKRA2	KA2	KC2	KESP	D2
44.42 (0.442)	1.000	0.221	0.306	8.696	8.917	0.294	0.240	0.044

71 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 44.42 kPa (6.442 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

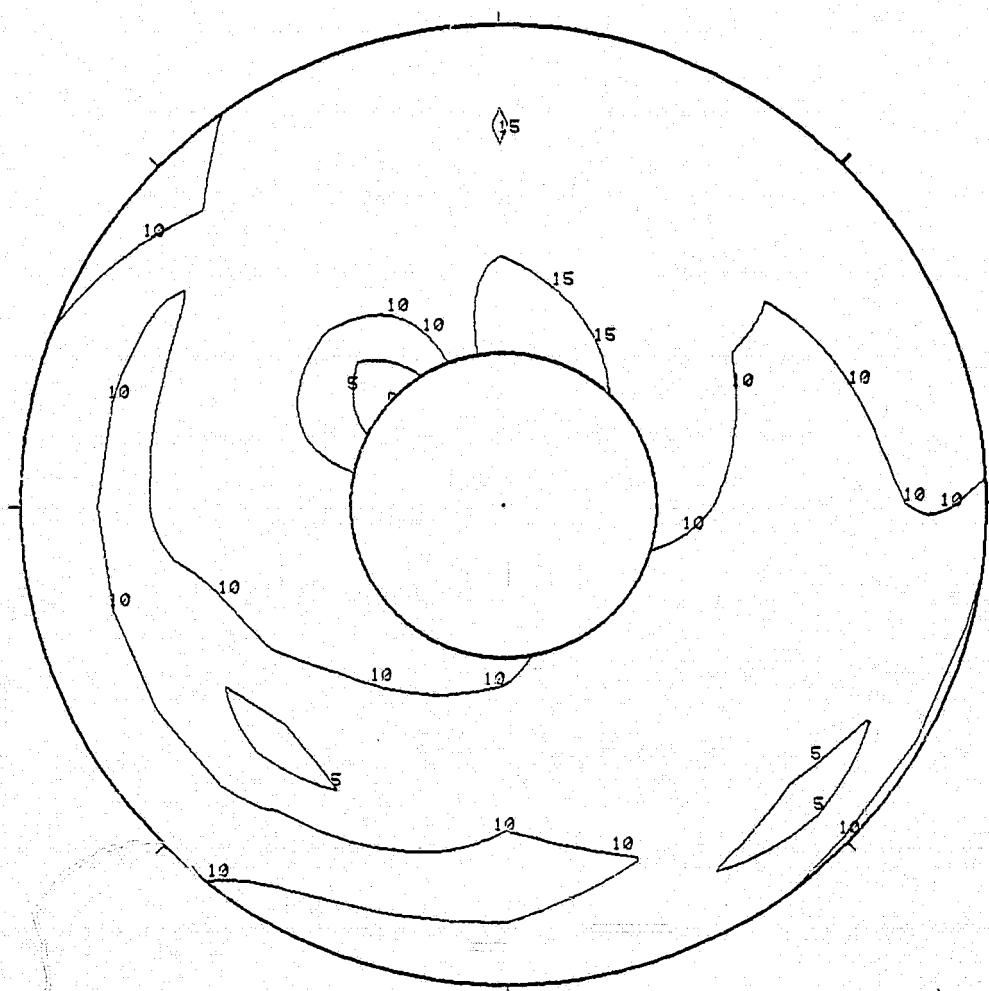
FIGURE G-71 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 60.7$ %

FSCP - NASA DATA STUDY

DATA PART/POINT 382 / 3 IDENT. 71
THE SEGMENT START TIME WAS AT 0:52:38.032

MACH 2.2	ALPHA 4	BETA 0	RHO 0.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 60.7%	CIVV -25.0
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71 (k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01021

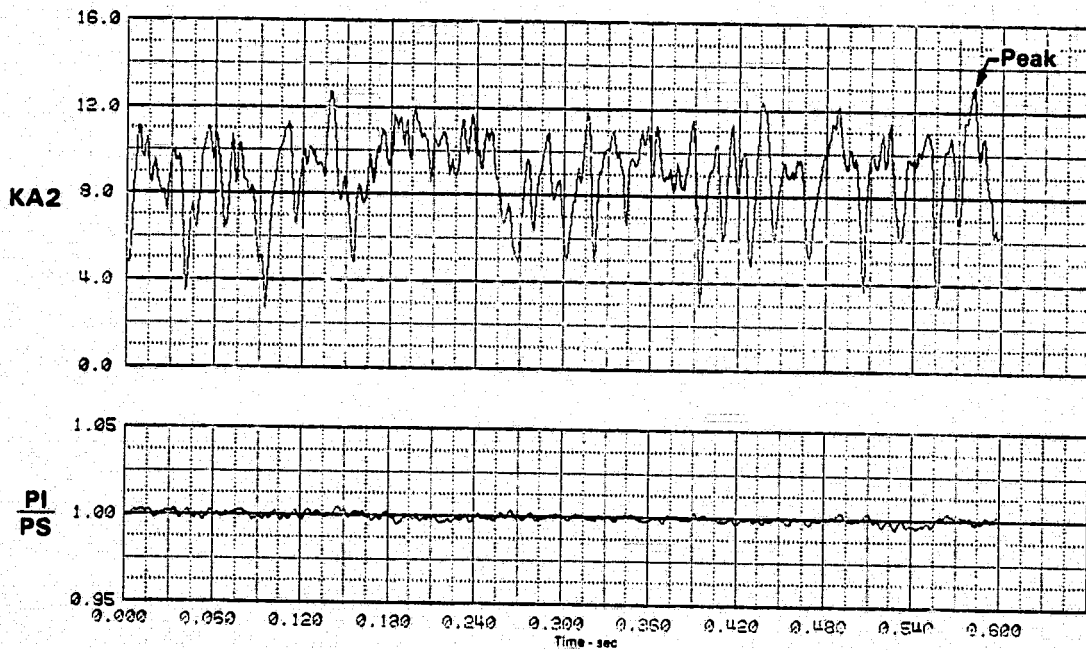
FIGURE G-71 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 60.7\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 382 / 3 IDENT. 71
THE SEGMENT START TIME WAS AT 0:52:33.092

MACH 2.2	ALPHA 4	BETA 0	RHO 0.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 60.7%	CIVV -25.0
P1 44.46 (0.448)	PI/PS 1.001	KTHETA 0.289	KRA2 0.452	BKRA2 12.840	KA2 13.130	KC2 0.343	KOSP 0.347
							D2 0.068

71(I) Time History Plots 170 Hz



PEAK AT TIME = 0.581034 SECONDS

FIGURE G-71(Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 60.7 %

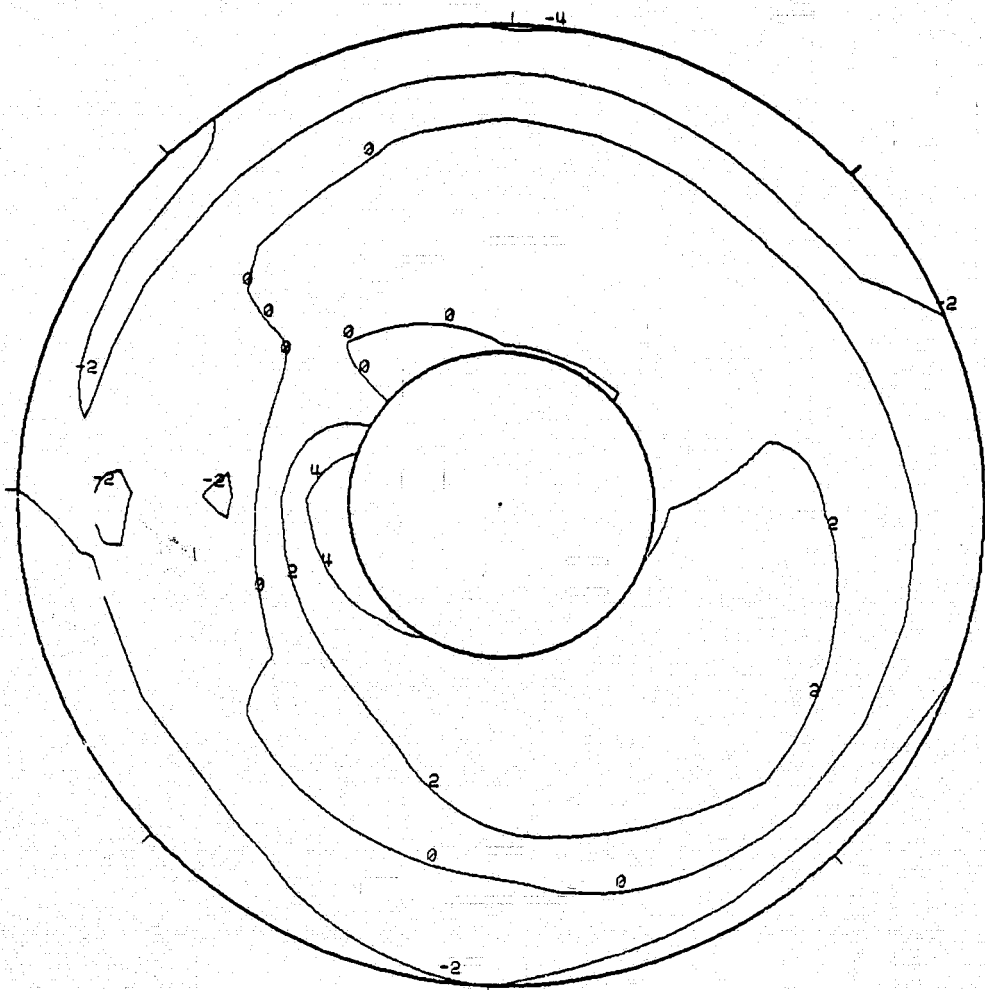
FSCP - NASA DATA STUDY

DATA PART/POINT 382 / 3 IDENT. 71
THE SEGMENT START TIME WAS AT 0:52:38.092

MACH 2.2 ALPHA 4 BETA 0 RHO 0.0 DELTA3 25.0 BYPASS 0.07742 (120.0) WAT2 60.7% CIVV -25.0

PI 44.46 (6.448) PI/PS 1.001 KTHETA 0.289 KRA2 0.452 BKRA2 12.840 KA2 13.130 KC2 0.343 KOSP 0.347 D2 0.068

71 (m) Instantaneous Total Pressure Contour at Peak Instantaneous $K_{a/2}$
170 Hz



MEAN FACE PRESSURE = 44.46 kPa (6.448 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.581034 SECONDS

FIGURE G-71 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 60.7 %

FSE - NASA Data Study
 Part/Point - 545/2, Ident 72
 RHO DELTA3 BYPASS CIVV
 1.0 25.0 0.078(121.1) -25.00

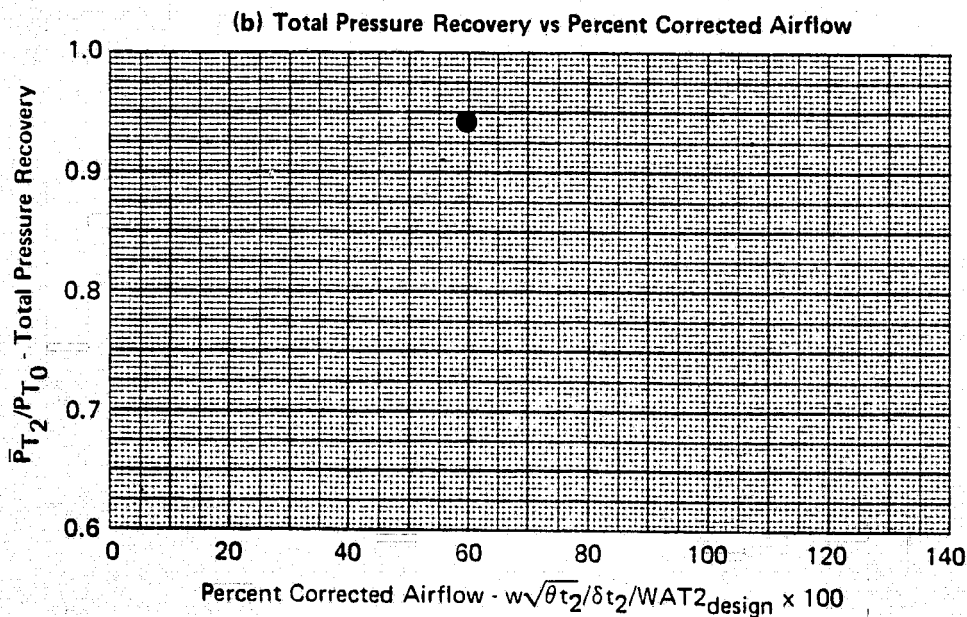
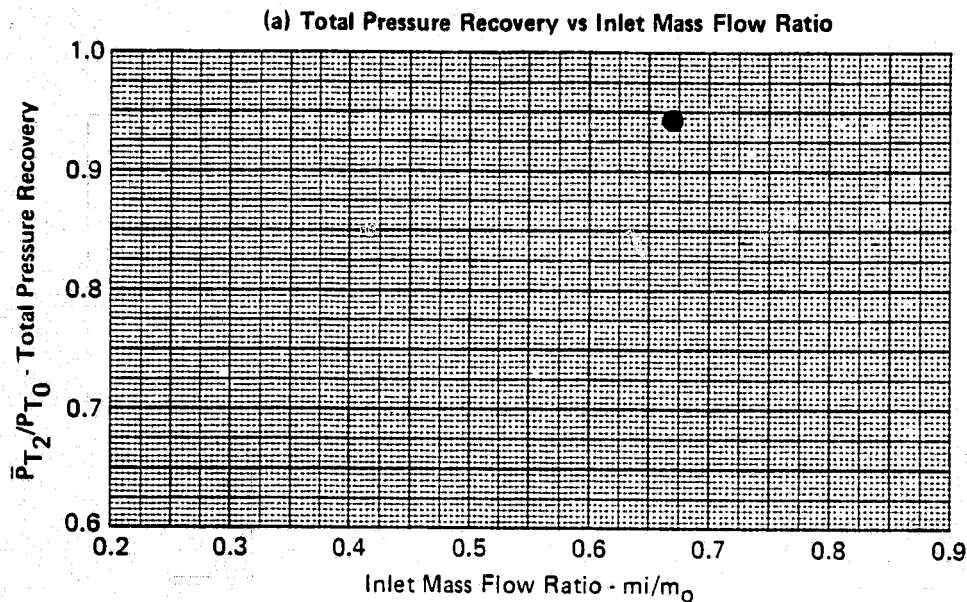
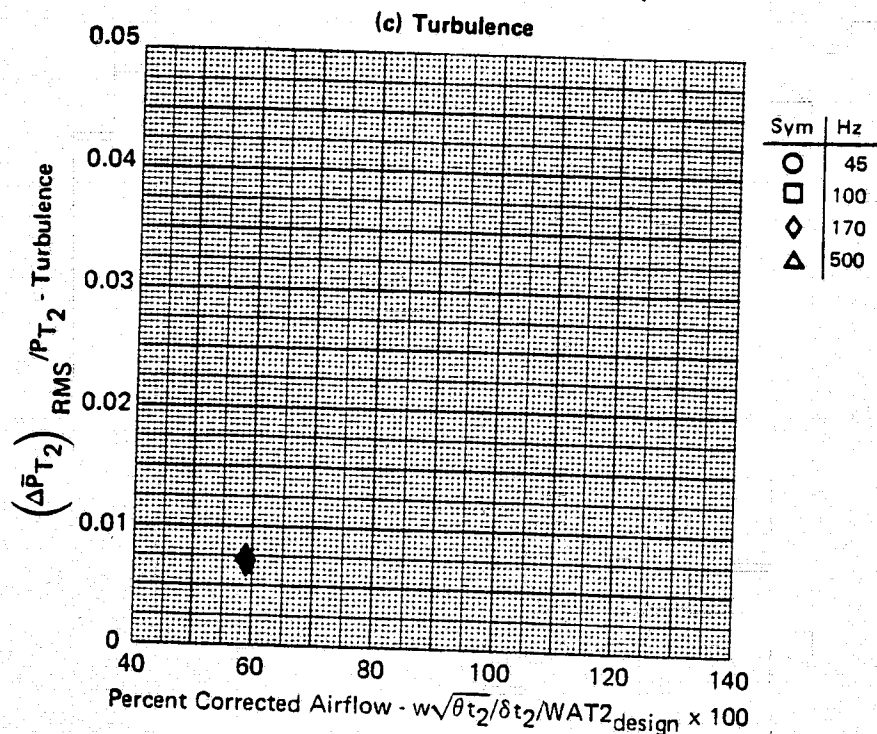


FIGURE G-72
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = 4.0, \beta = 0.0, WAT2 = 59.2 \%$

GP77-0658-1

FSE - NASA Data Study
 Part/Point - 545/2, Ident 72
 RHO DELTA3 BYPASS CIVV
 1.0 25.0 0.078(121.1) -25.00

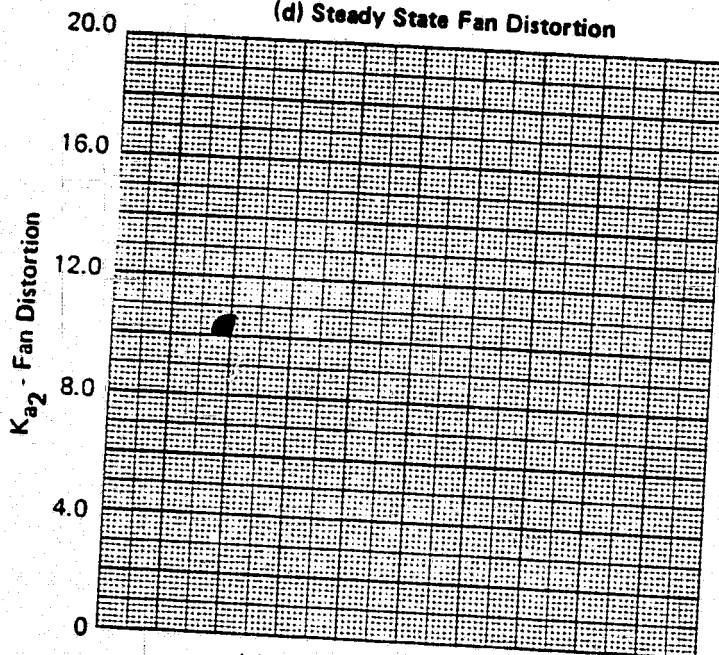


GP77-0658-5

FIGURE G-72 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 59.2\%$

FSE - NASA Data Study
 Part/Point - 545/2, Ident 72
 RHO DELTA3 BYPASS CIVV
 1.0 25.0 0.078(121.1) -25.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion

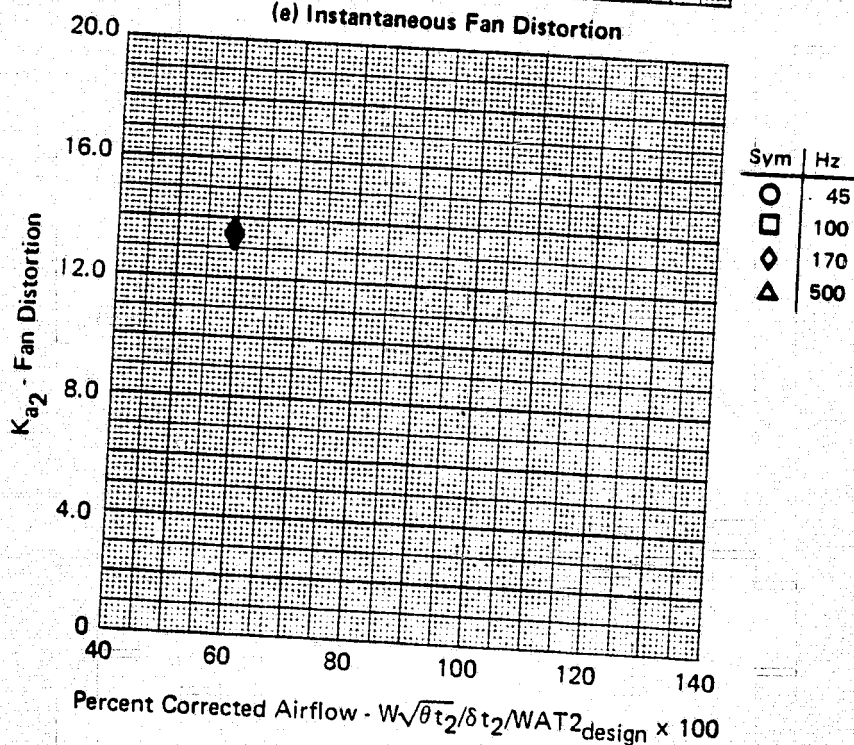
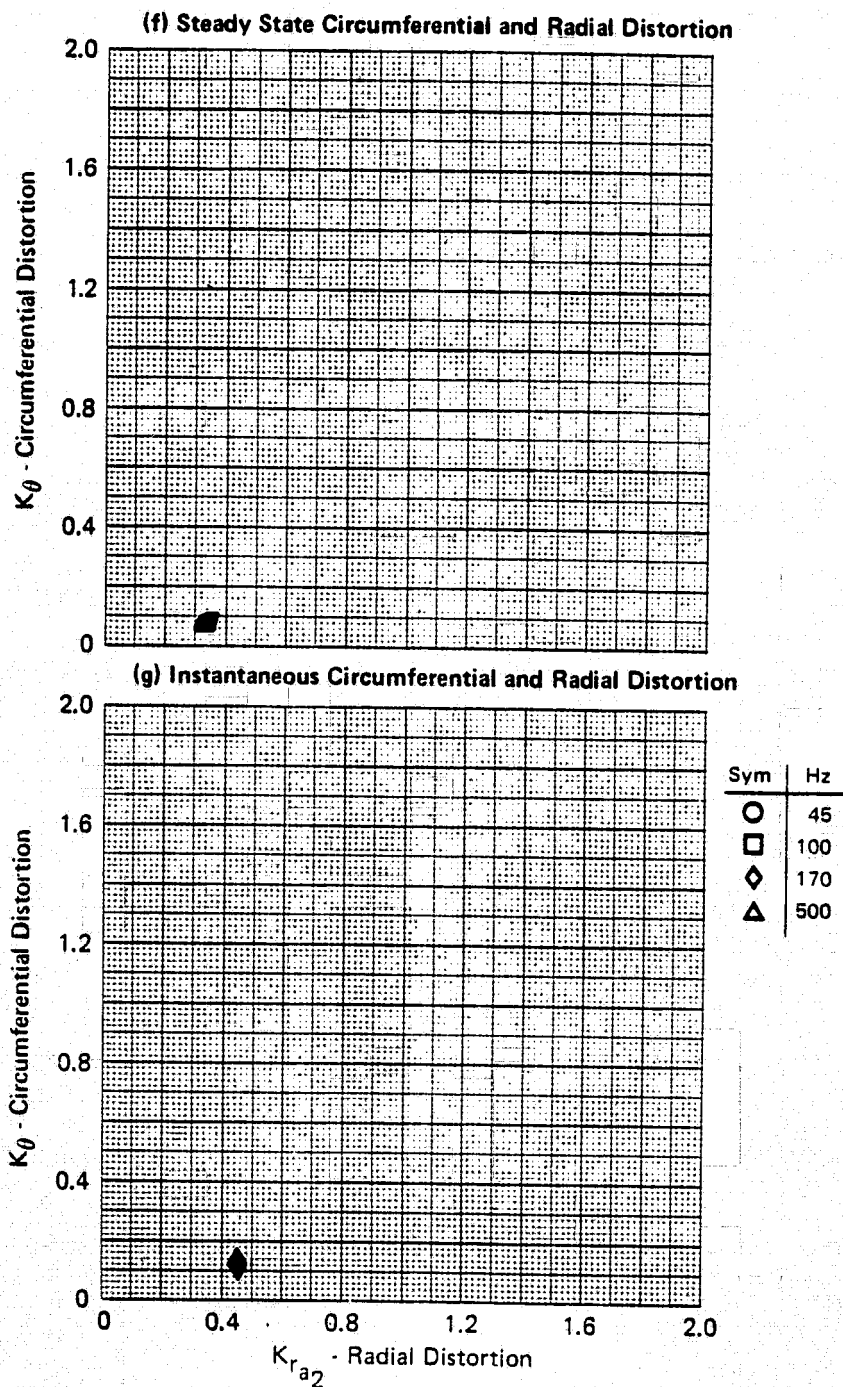


FIGURE G-72 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 59.2\%$

GP77-0658-3

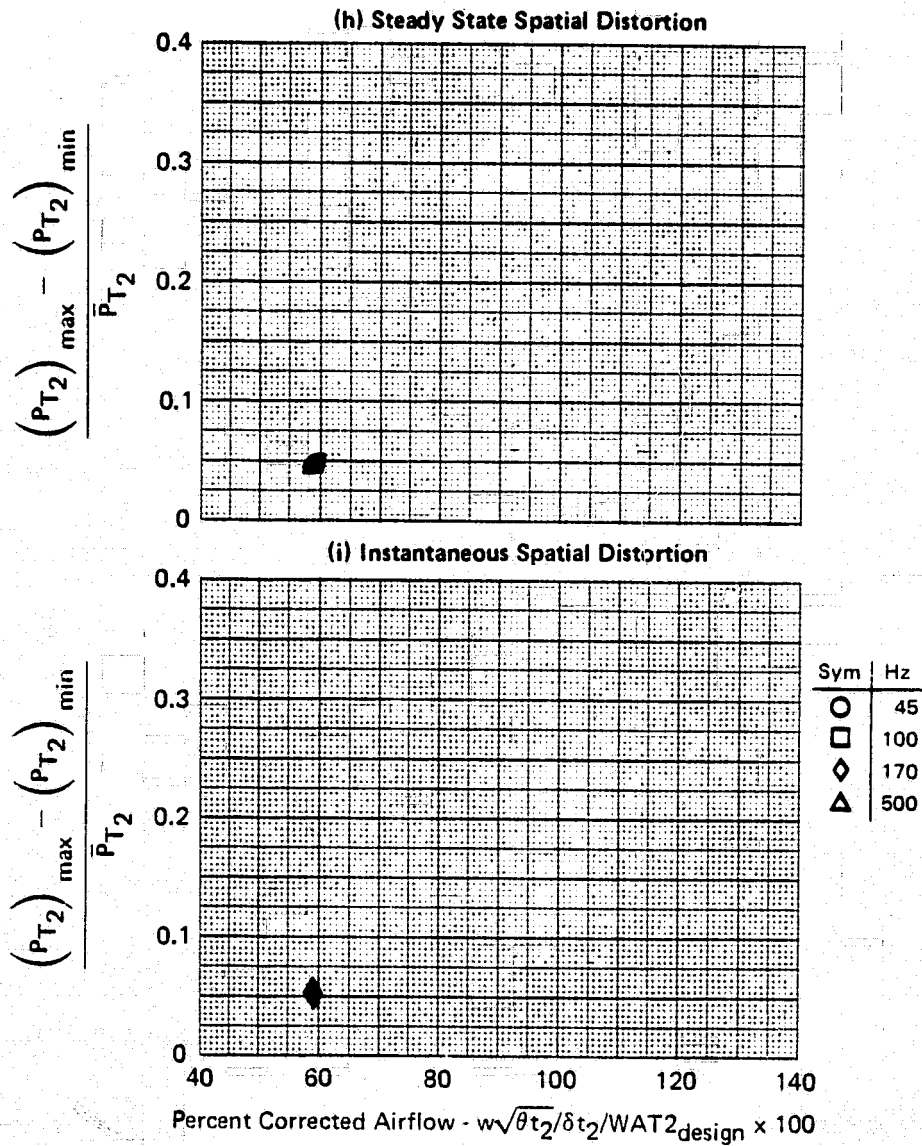
FSE - NASA Data Study
 Part/Point - 545/2, Ident 72
 RHO · DELTA3 BYPASS CIVV
 1.0 25.0 0.078(121.1) -25.00



GP77-0658-2

FIGURE G-72 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 59.2%

FSE - NASA Data Study
 Part/Point - 545/2, Ident 72
 RHO DELTA3 BYPASS CIVV
 1.0 25.0 0.078(121.1) -25.00



GP77-0658-4

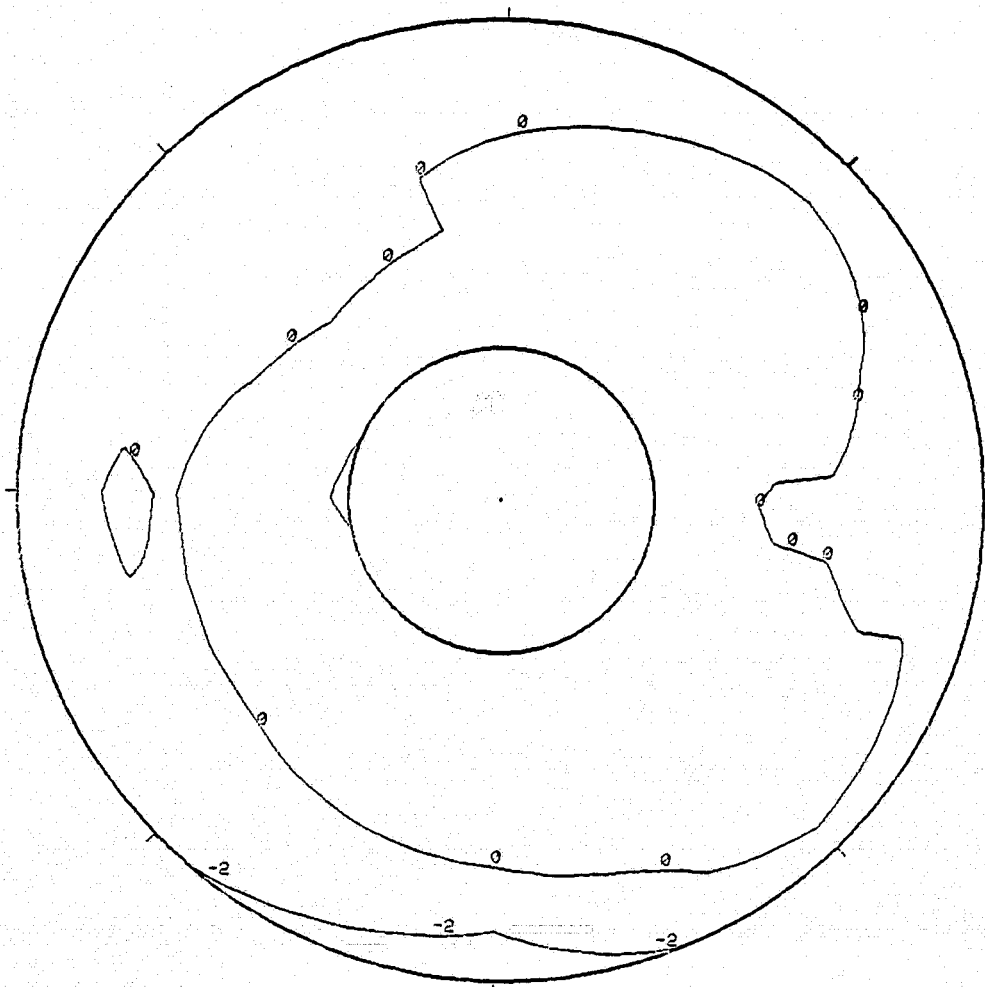
FIGURE G-72 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 59.2\%$

FSE - NASA DATA STUDY

DATA PART/POINT 545 / 2 IDENT. 72
THE SEGMENT START TIME WAS AT 23:30: 2.091

MACH 2.2	ALPHA 4	BETA 0	RHO 1.0	DELTA3 25.0	BYPASS 0.07813 (121.1)	WAT2 59.2%	CIVV -25.0
PI 56.96 (8.261)	PI/PS 1.000	KTHETA 0.074	KRA2 0.343	BKRA2 10.226	KA2 10.300	KC2 0.071	KQSP 0.064
							D2 0.045

72 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 56.96 kPa (8.261 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-72 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 59.2 %

FSE - NASA DATA STUDY

DATA PART/POINT 545 / 2 IDENT. 72
THE SEGMENT START TIME WAS AT 23:30: 2.091

MACH
2.2

ALPHA
4

BETA
0

RHO
1.0

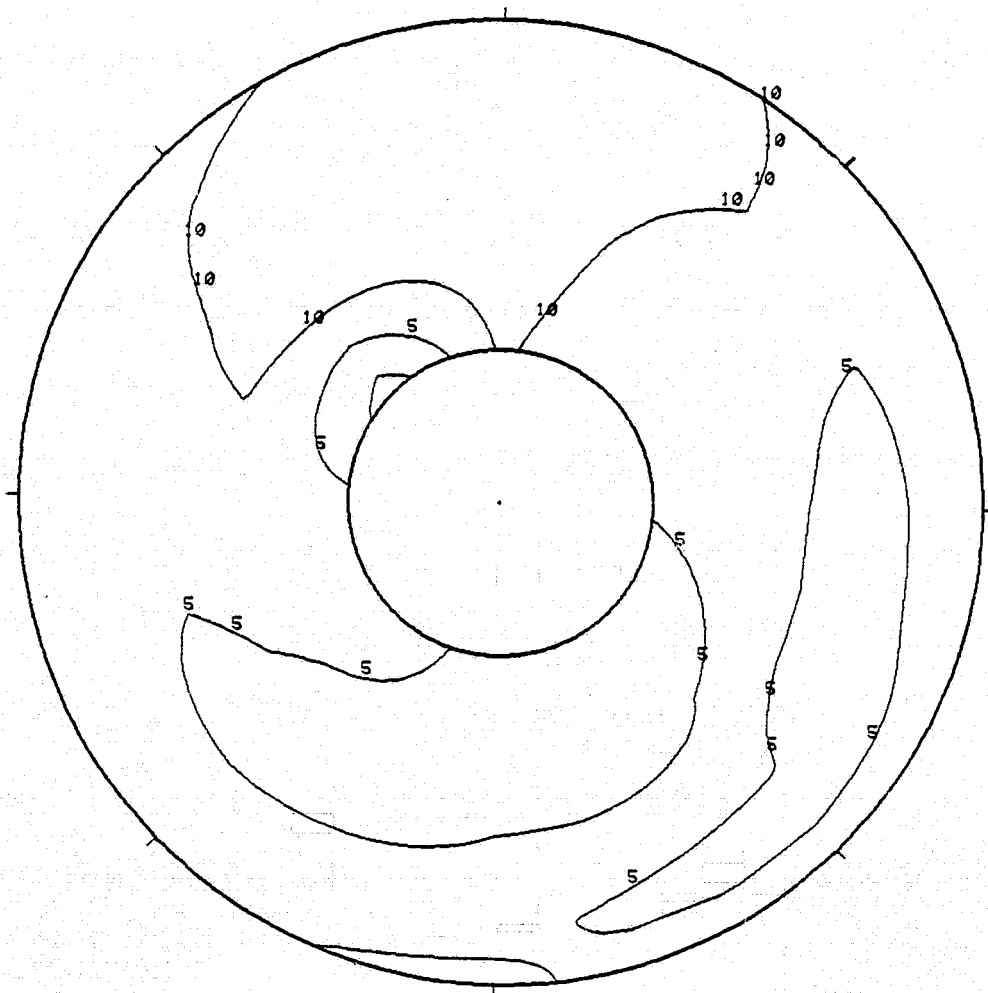
DELTA3
25.0

BYPASS
0.07813 (121.1)

WAT2
59.2%

CIVV
-25.0

72(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00722

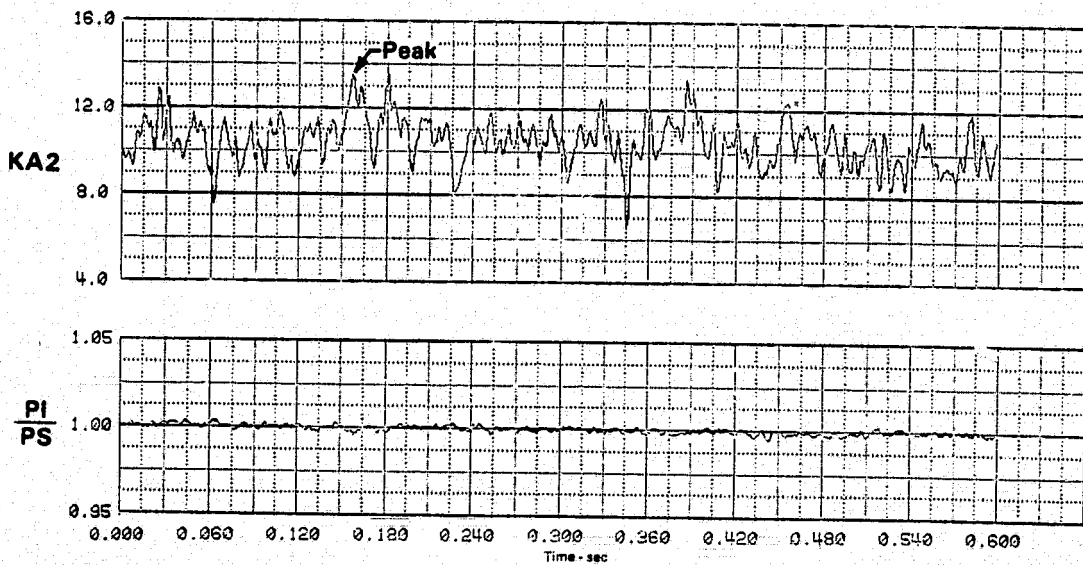
FIGURE G-72 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 59.2 %

FSE - NASA DATA STUDY

DATA PART/POINT 545 / 2 IDENT. 72
THE SEGMENT START TIME WAS AT 23:30: 2.091

MACH 2.2	ALPHA 4	BETA 0	RHO 1.0	DELTA3 25.0	BYPASS 0.07813 (121.1)	WAT2 59.2%	CIVV -25.0
PI 56.90 (8.252)	PI/PS 0.999	KTHETA 0.126	KRA2 0.449	BKRA2 13.387	KA2 13.513	KC2 0.071	KOSP 0.066
							O2 0.053

72 (I) Time History Plots 170 Hz



PEAK AT TIME = 0.156890 SECONDS

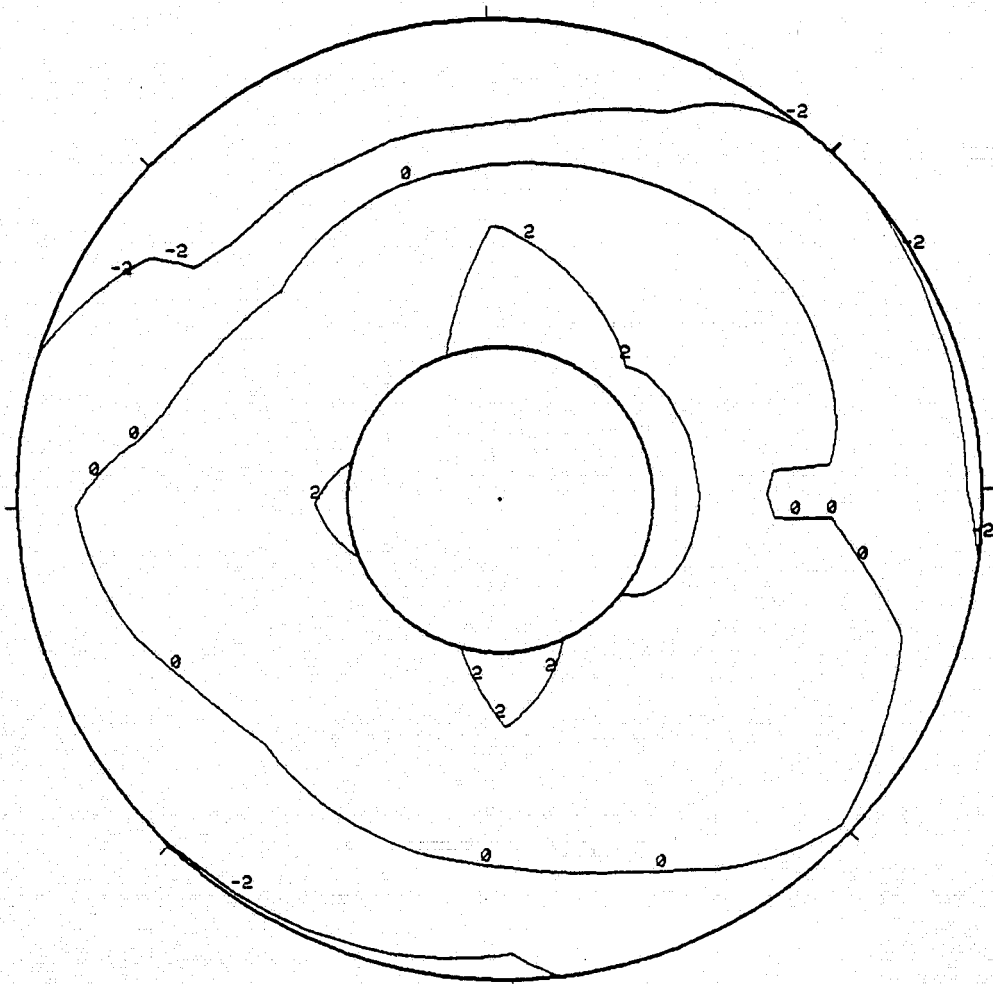
FIGURE G-72 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 59.2 %

FSE - NASA DATA STUDY

DATA PART/POINT 545 / 2 IDENT. 72
THE SEGMENT START TIME WAS AT 23:30: 2.091

MACH 2.2	ALPHA 4	BETA 0	RHO 1.0	DELTA3 25.0	BYPASS 0.07813 (121.1)	WAT2 59.2%	CIVV -25.0
P1 56.90 (8.252)	P1/PS 0.999	KTHETA 0.126	KRA2 0.449	BKRA2 13.387	KA2 13.513	KC2 0.071	KOSP 0.066
							D2 0.053

72 (m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 56.90 kPa (8.252 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.156890 SECONDS

FIGURE G-72 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 59.2 %

FSE - NASA Data Study
 Part/Point - 546/4, Ident 73
 RHO DELTA3 BYPASS CIVV
 1.0 25.0 0.078(121.1) -25.00

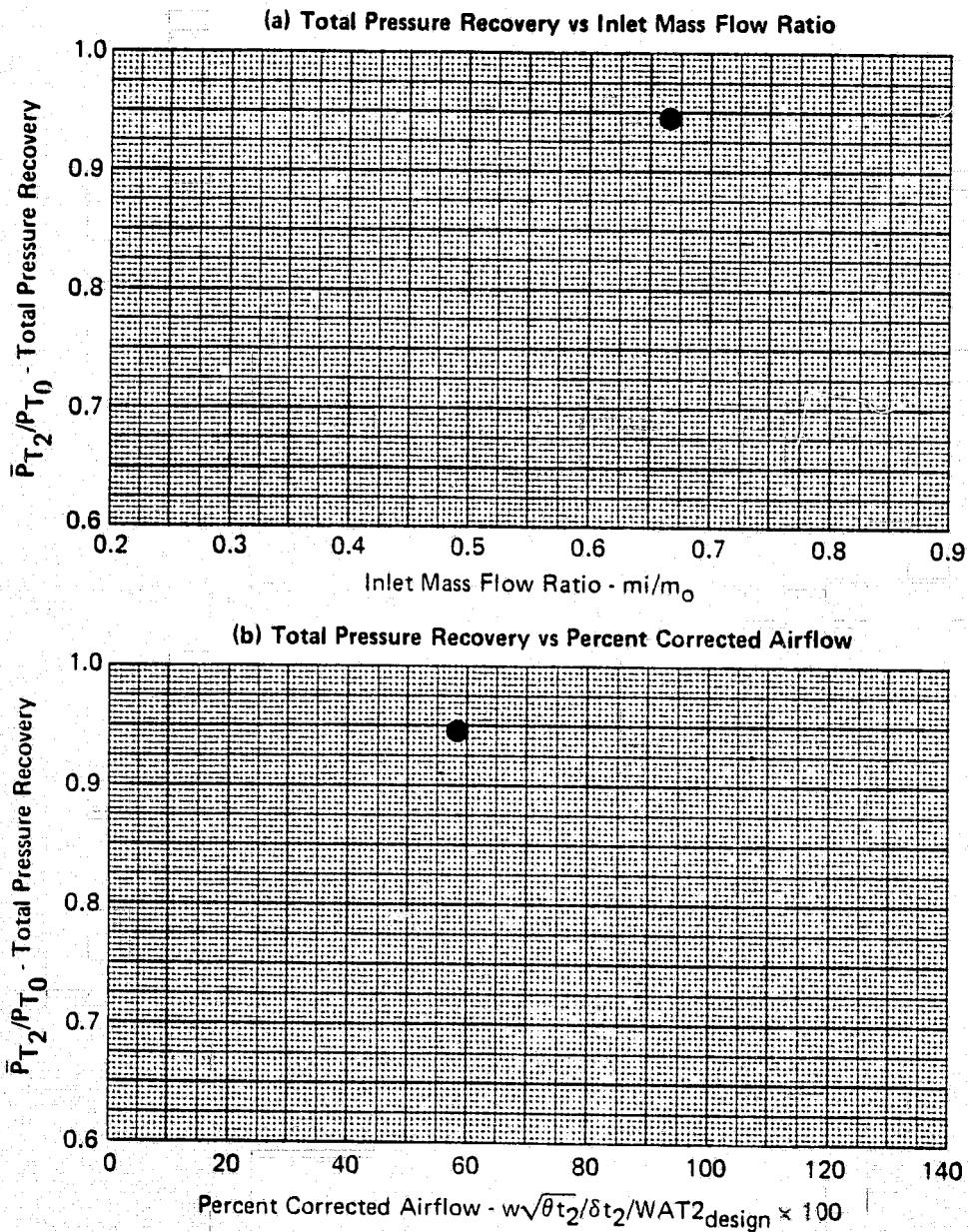
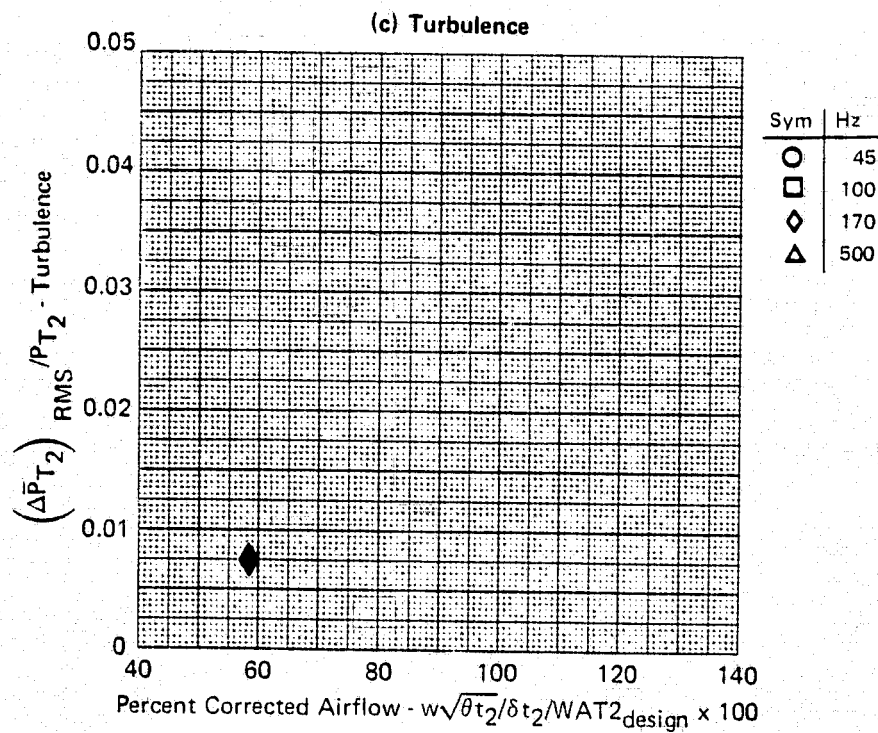


FIGURE G-73
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = 4.0, \beta = 0.0, WAT2 = 58.2 \%$

GP77-0658-1

FSE - NASA Data Study
 Part/Point - 546/4, Ident 73
 RHO DELTA3 BYPASS CIVV
 1.0 25.0 0.078(121.1) -25.00



GP77-0658-5

FIGURE G-73 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2, \alpha = 4.0, \beta = 0.0, WAT2 = 58.2 \%$

FSE - NASA Data Study
 Part/Point - 546/4, Ident 73
 RHO DELTA3 BYPASS CIVV
 1.0 25.0 0.078(121.1) -25.00

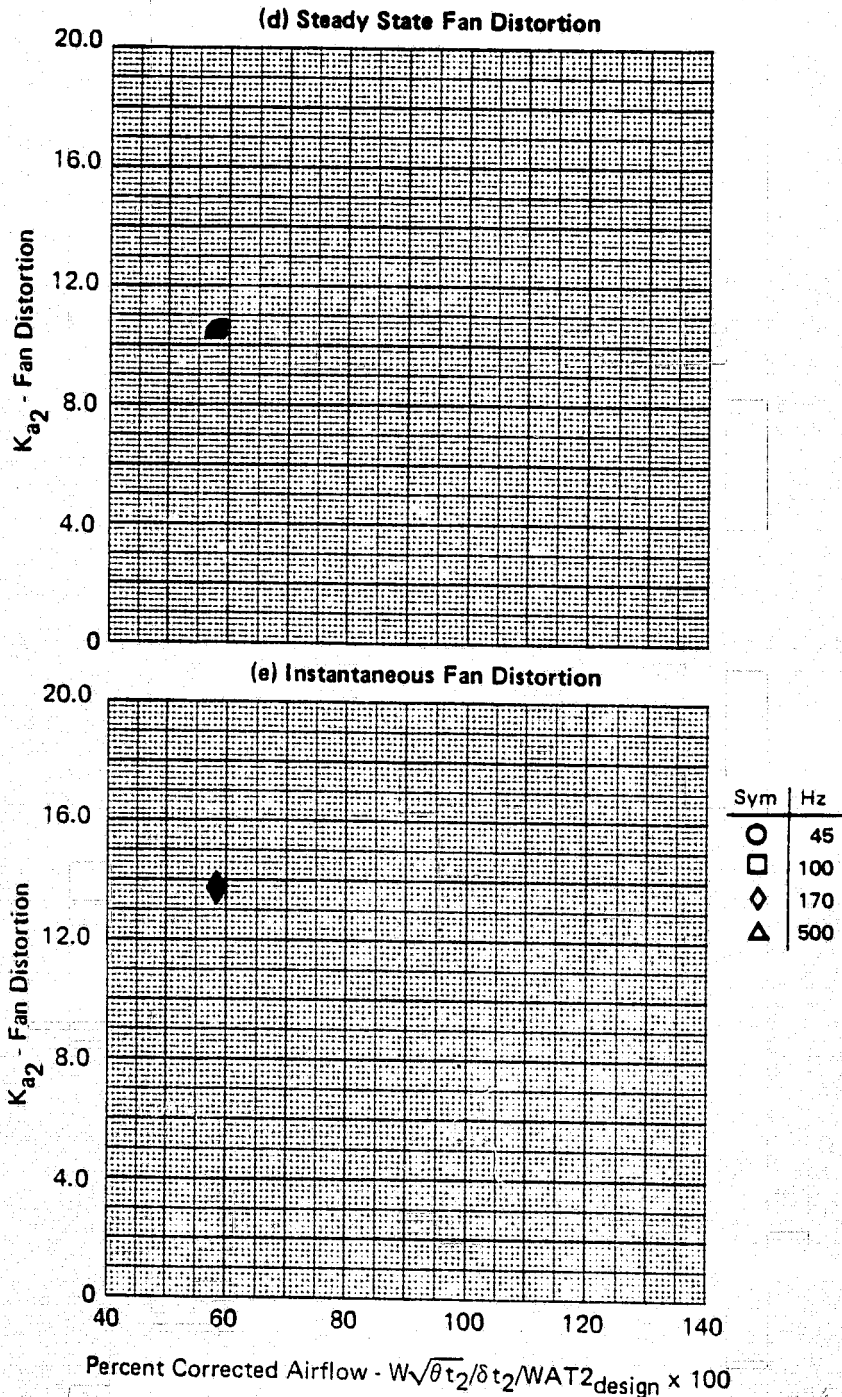


FIGURE G-73 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = 4.0, \beta = 0.0, WAT2 = 58.2 \%$

FSE - NASA Data Study
 Part/Point - 546/4, Ident 73
 RHO DELTA3 BYPASS CIVV
 1.0 25.0 0.078(121.1) -25.00

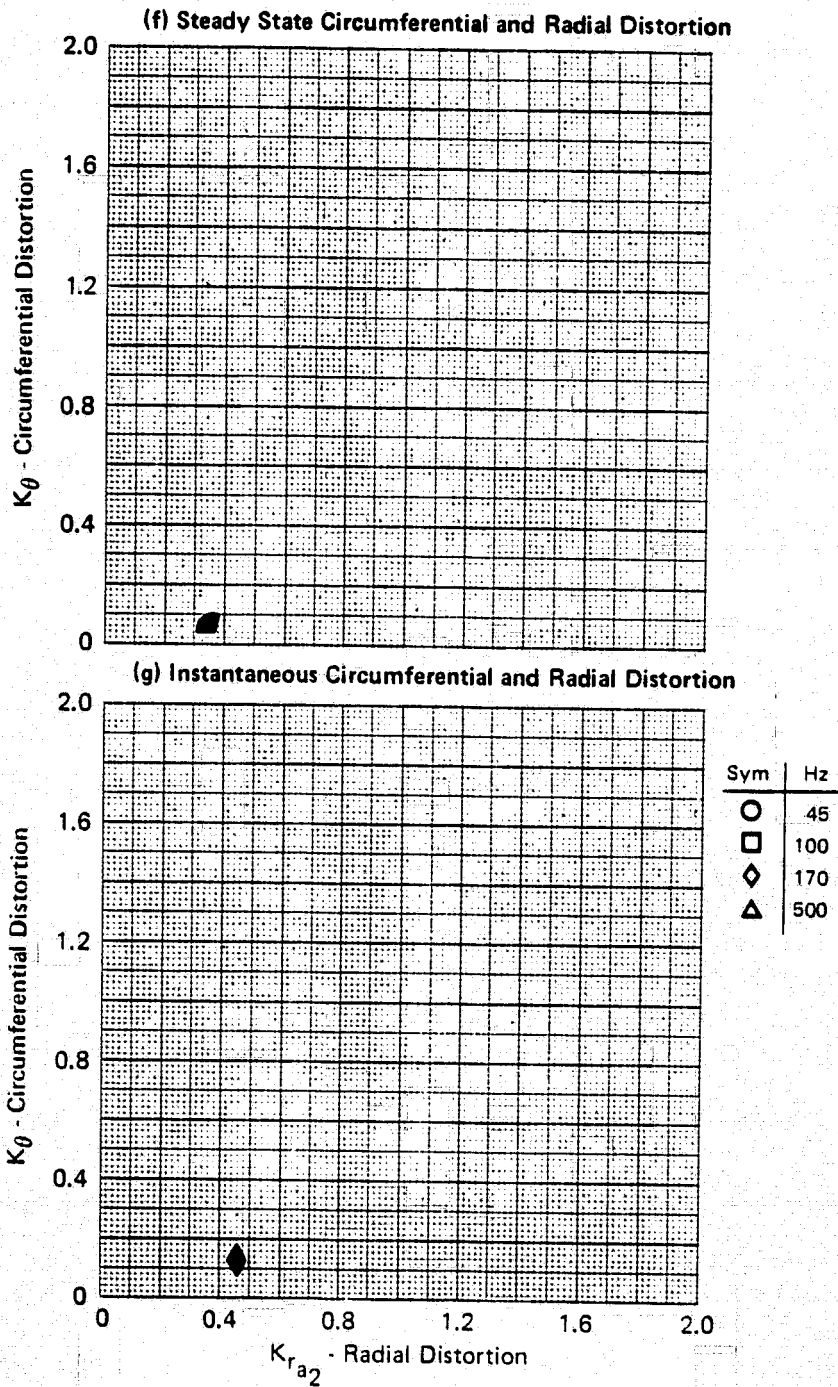
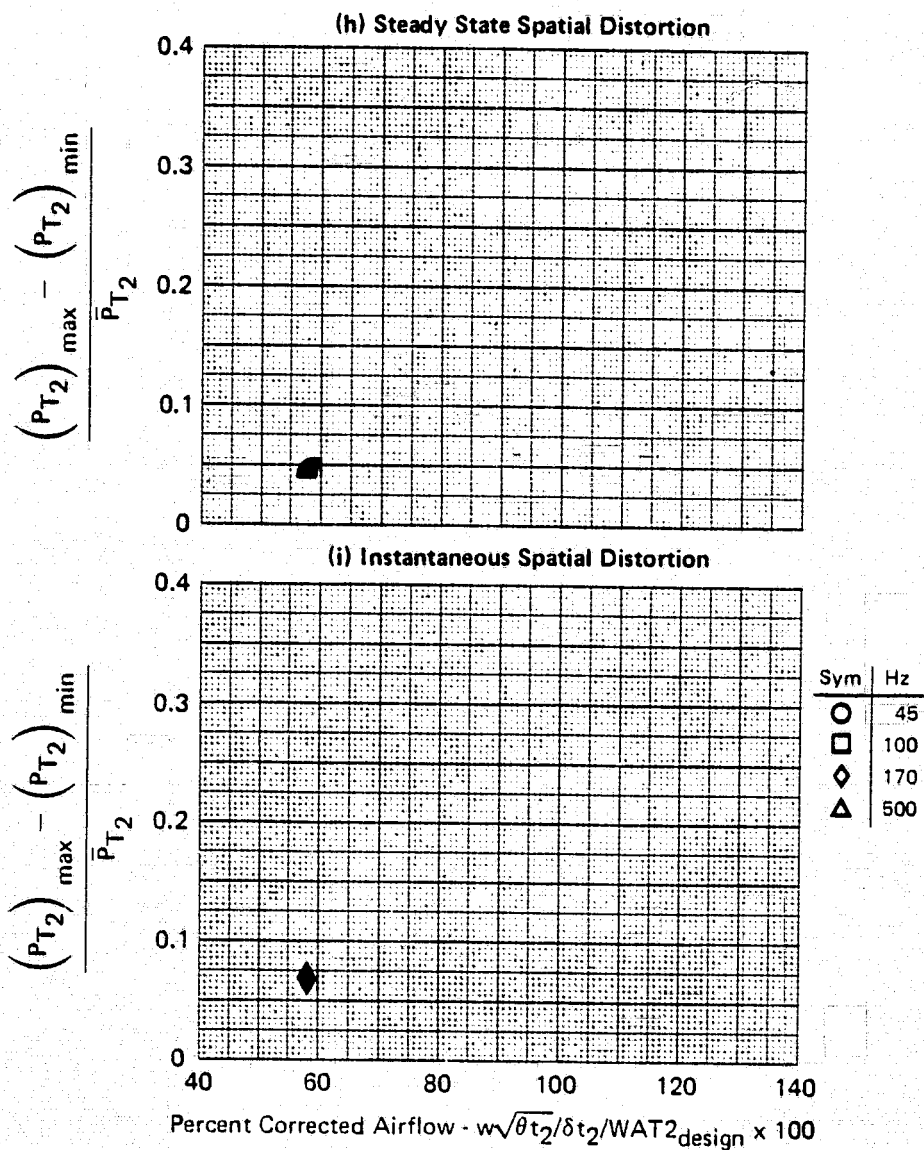


FIGURE G-73 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 58.2\%$

FSE - NASA Data Study
 Part/Point - 546/4, Ident 73
 RHO DELTA3 BYPASS CIVV
 1.0 25.0 0.078(121.1) -25.00



GP77-0658-4

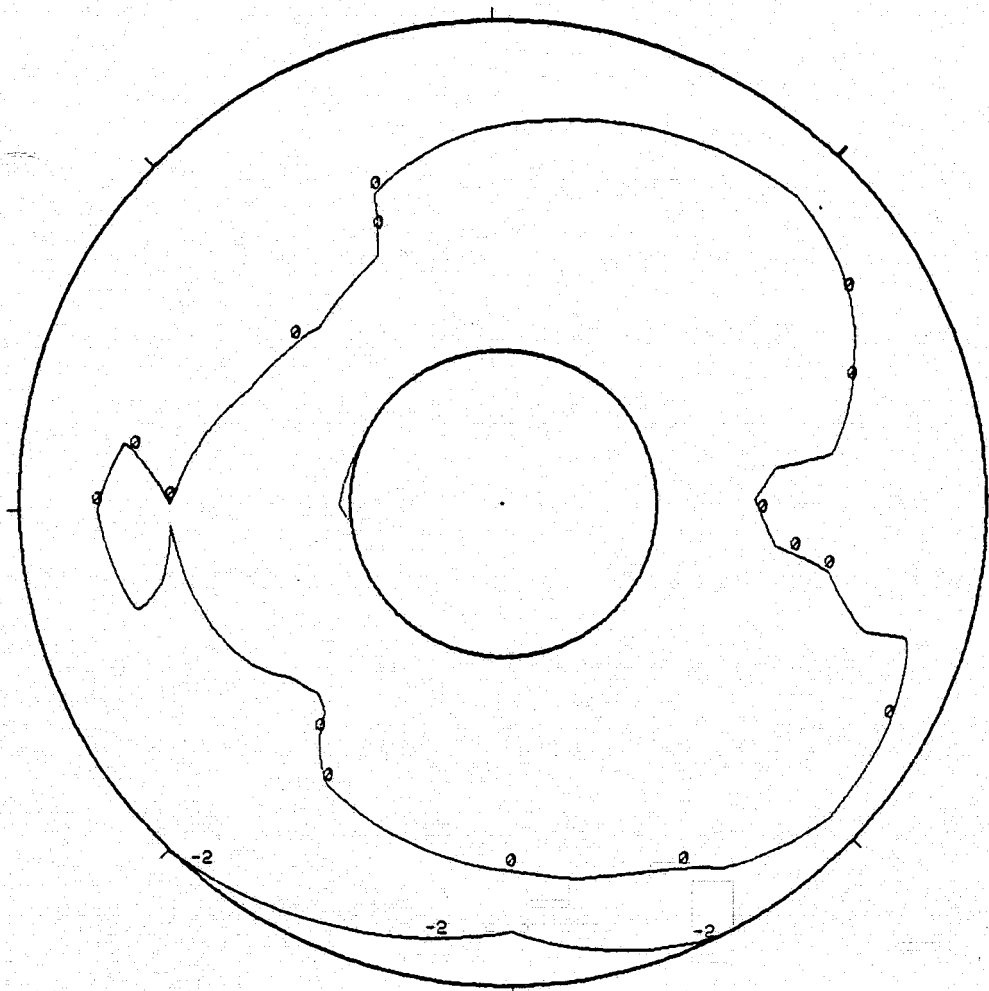
FIGURE G-73 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 58.2\%$

FSE - NASA DATA STUDY

DATA PART/POINT 546 / 4 IDENT. 73
THE SEGMENT START TIME WAS AT 23:43:50.091

MACH 2.2	ALPHA 4	BETA 0	RHO 1.0	DELTA3 25.0	BYPASS 0.07813 (121.1)	WAT2 58.2%	CIVV -25.0
PI 56.91 (8.254)	PI/PS 1.000	KTHETA 0.072	KRA2 0.354	BKRA2 10.413	KA2 10.485	KC2 0.069	KESP 0.061
							D2 0.046

73 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 56.91 kPa (8.254 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

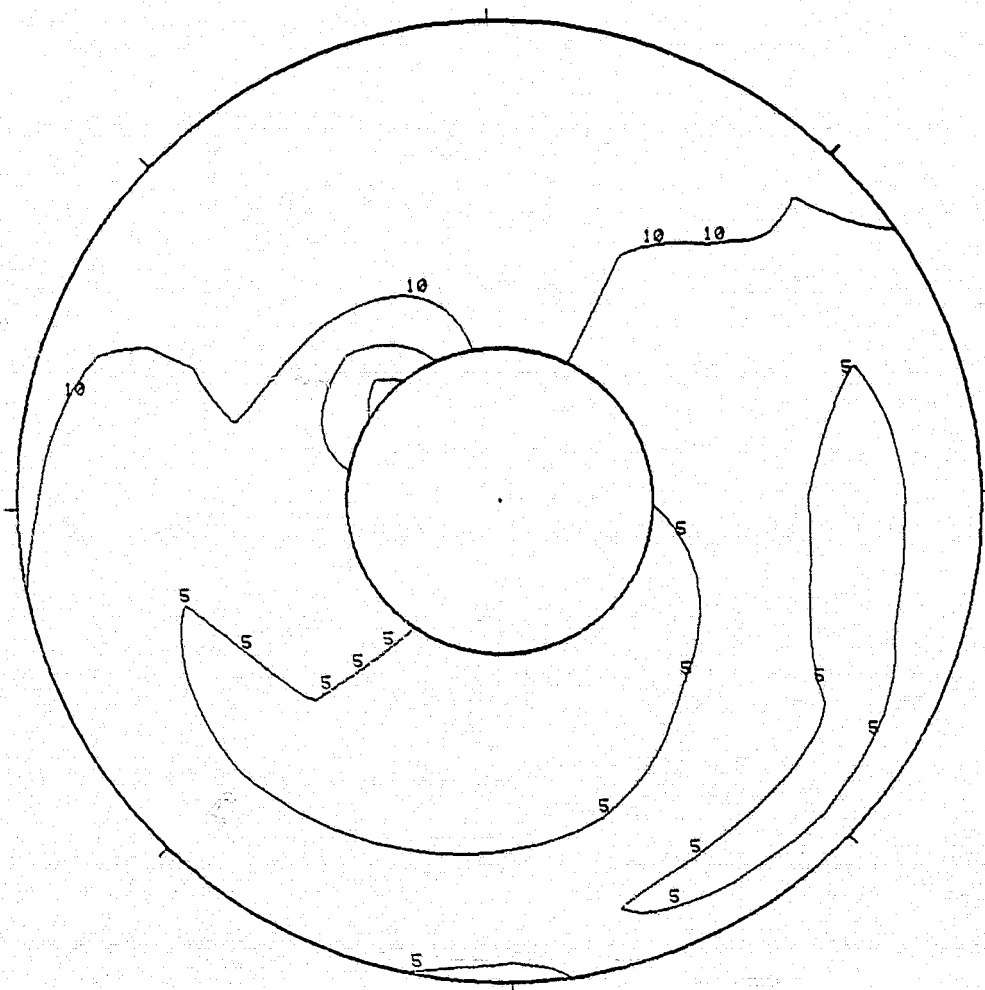
FIGURE G-73 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 58.2 %

FSE - NASA DATA STUDY

DATA PART/POINT 546 / 4 IDENT. 73
THE SEGMENT START TIME WAS AT 23:43:50.091

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
2.2	4	0	1.0	25.0	0.07813 (121.1)	58.2%	-25.0

73(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00767

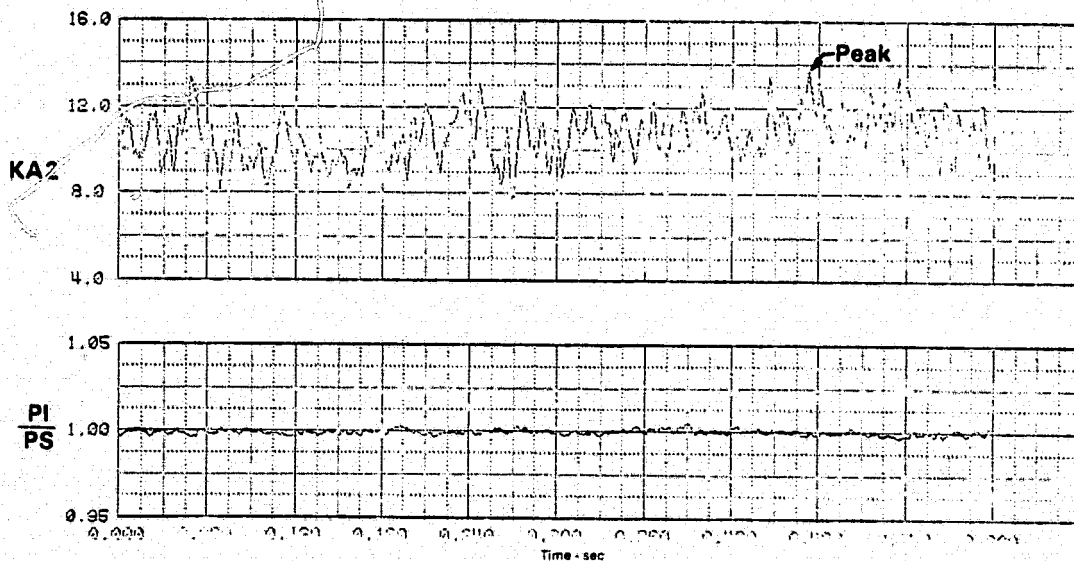
FIGURE G-73 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, $WAT2 = 58.2\%$

FSE - NASA DATA STUDY **ORIGINAL PAGE IS
OF POOR QUALITY**

DATA PART/POINT 546 / 4 IDENT. 73
THE SEGMENT START TIME WAS AT 23:43:53.091

MACH 2.2	ALPHA 4	BETA 0	RHO 1.0	DELTA3 25.0	BYPASS 0.07813 (121.1)	WAT2 58.2%	CIVV -25.0
P1 56.80 (8.238)	P1/PS 0.993	KTHETA 0.123	KRA2 0.452	EKRA2 13.575	KA2 13.693	KC2 0.149	KOSP 0.146
							D2 0.063

**73 (I) Time History Plots
170 Hz**



PEAK AT TIME = 0.472834 SECONDS

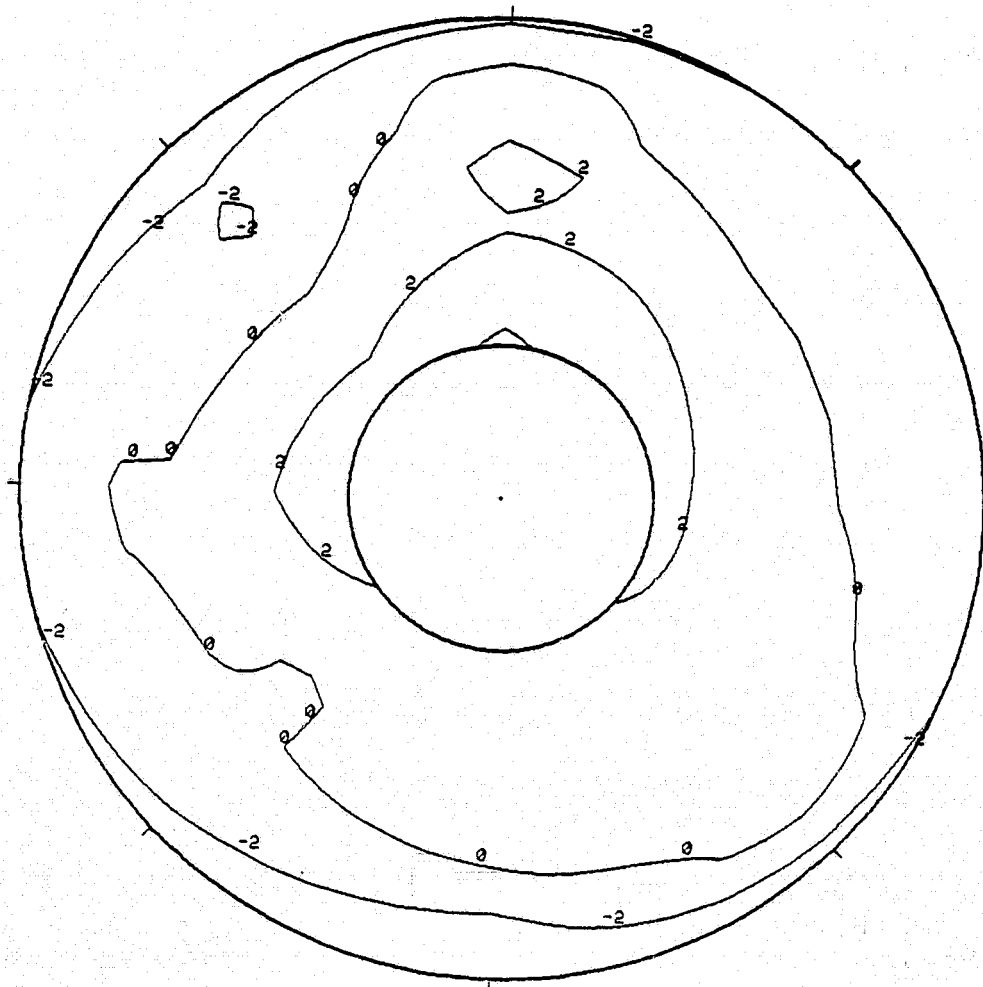
**FIGURE G-73 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 58.2%**

FSE - NASA DATA STUDY

DATA PART/POINT 546 / 4 IDENT. 73
THE SEGMENT START TIME WAS AT 23:43:50.001

MACH 2.2	ALPHA 4	BETA 0	RHO 1.0	DELTA3 25.0	BYPASS 0.07813 (121.1)	WAT2 58.2%	CIVV -25.0
P1 56.80 (8.238)	P1/PS 0.993	KTHETA 0.123	KRA2 0.462	BKRA2 13.575	KR2 13.598	KC2 0.149	KOSP 0.146
							D2 0.068

73(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 56.80 kPa (8.238 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.472834 SECONDS

FIGURE G-73 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 4.0$, $\beta = 0.0$, WAT2 = 58.2 %

SERIES VIII - NASA Data Study
 Part/Point - 252/9, Ident 74
 RHO DELTA3 BYPASS CIVV
 6.0 25.0 0.077(120.0) -25.00

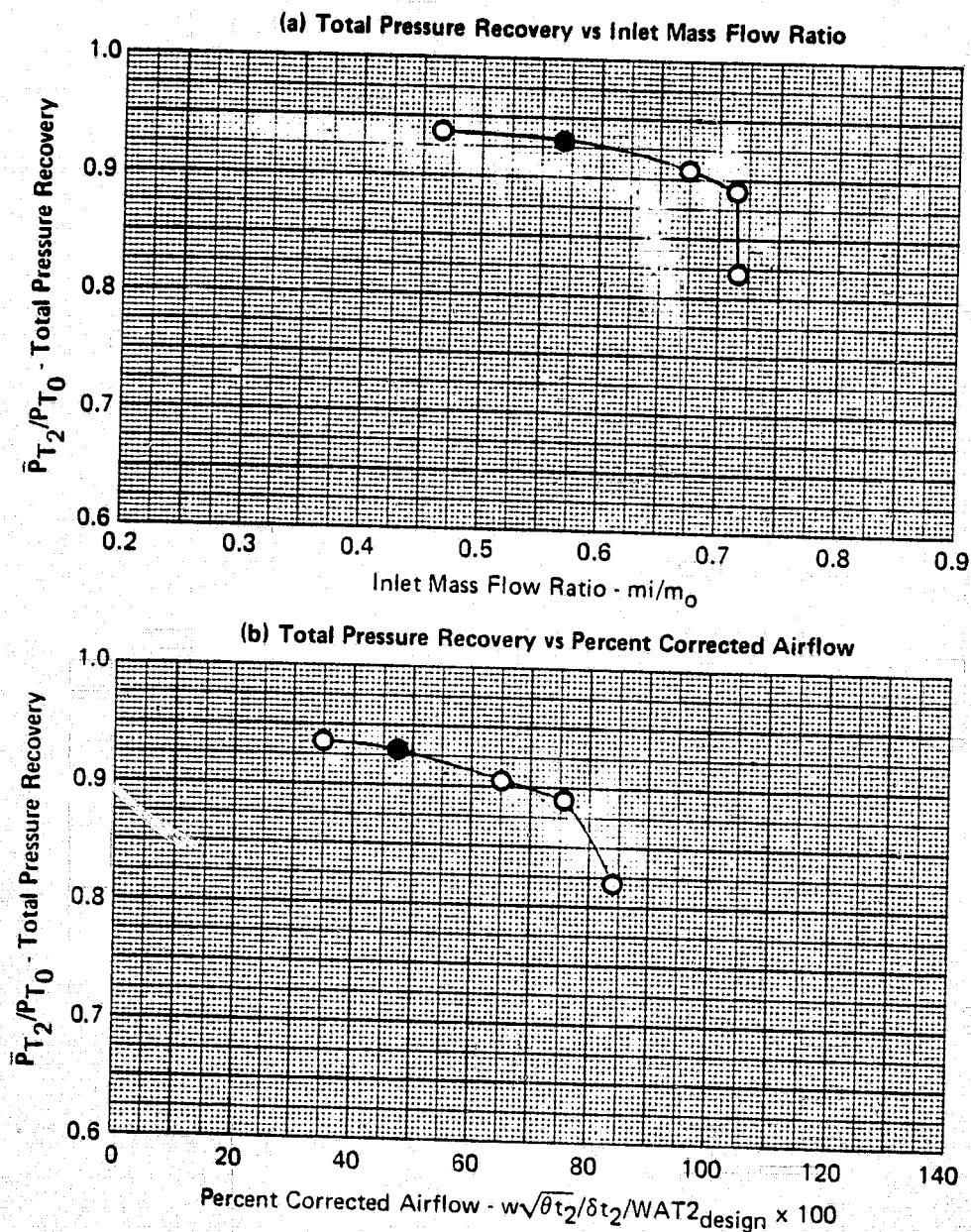
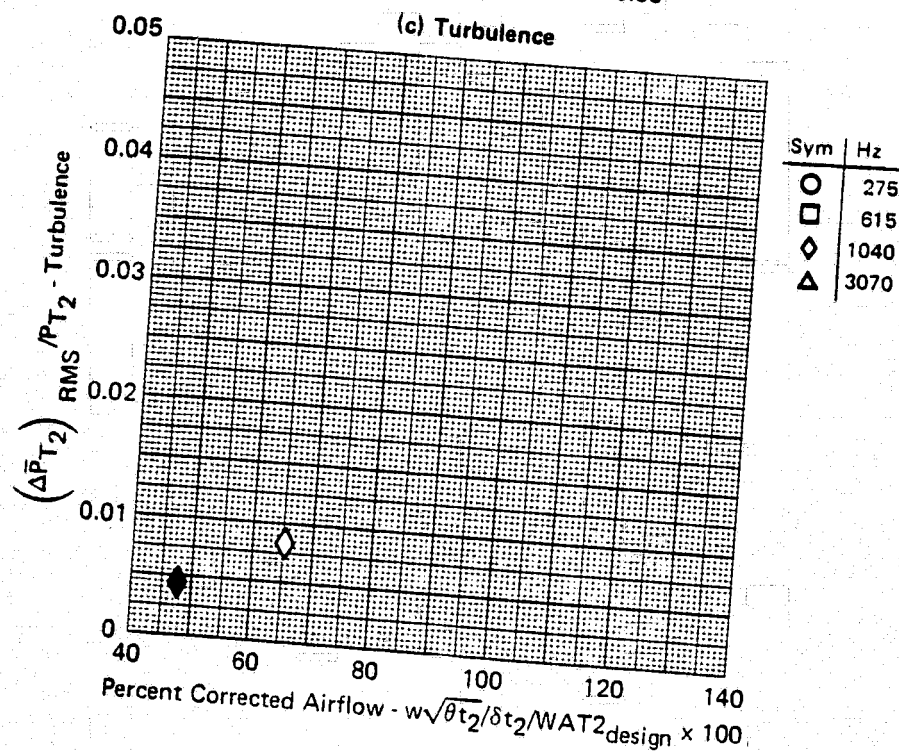


FIGURE G-74
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 47.3\%$

GP77-0658-1

SERIES VIII - NASA Data Study
 Part/Point - 252/9, Ident 74
 RHO DELTA3 BYPASS CIVV
 6.0 25.0 0.077(120.0) -25.00



GP77-0658-5

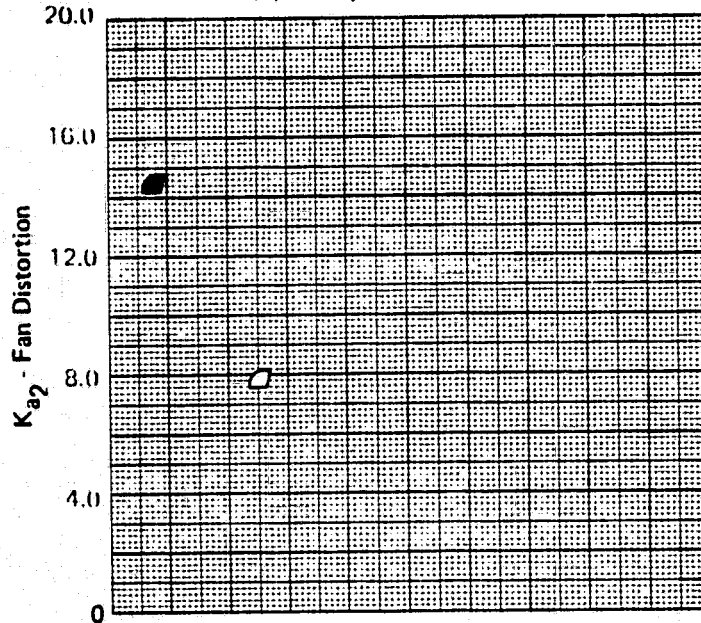
FIGURE G-74 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 47.3\%$

SERIES VIII - NASA Data Study

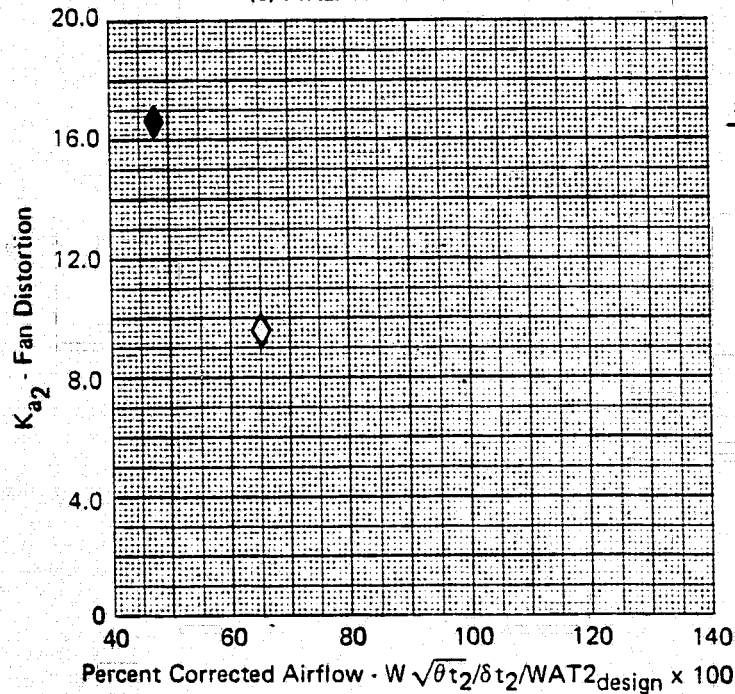
Part/Point - 252/9, Ident 74

RHO DELTA3 BYPASS CIVV
6.0 25.0 0.077(120.0) -25.00

(d) Steady State Fan Distortion



(e) Instantaneous Fan Distortion



Sym	Hz
○	275
□	615
◇	1040
△	3070

GP77-0658-3

FIGURE G-74 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 47.3\%$

SERIES VIII - NASA Data Study
 Part/Point - 252/9, Ident 74
 RHO DELTA3 BYPASS CIVV
 6.0 25.0 0.077(120.0) -25.00

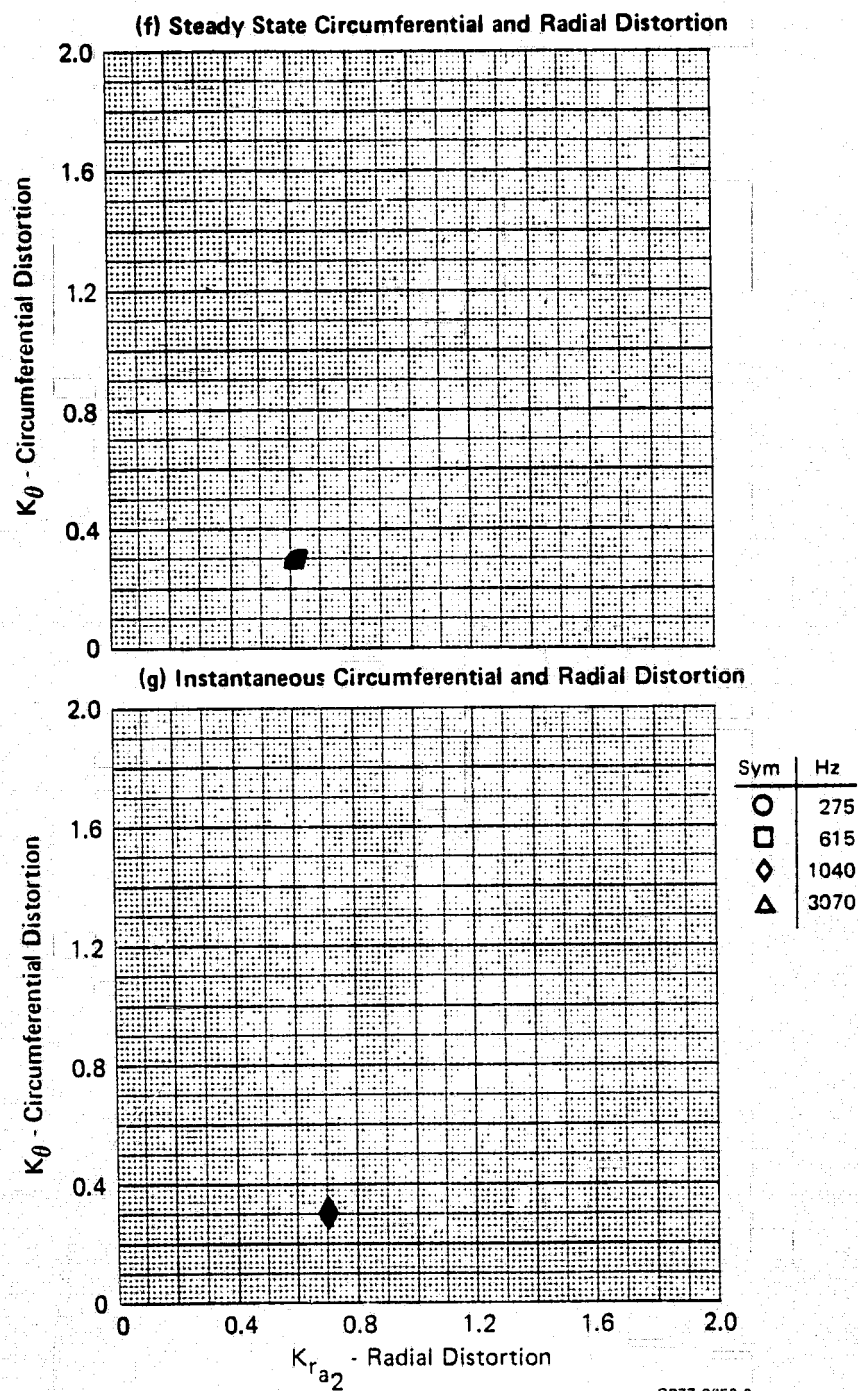


FIGURE G-74 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, WAT2 = 47.3 %

SERIES VIII - NASA Data Study
 Part/Point - 252/9, Ident 74
 RHO DELTA3 BYPASS CIVV
 6.0 25.0 0.077(120.0) -25.00

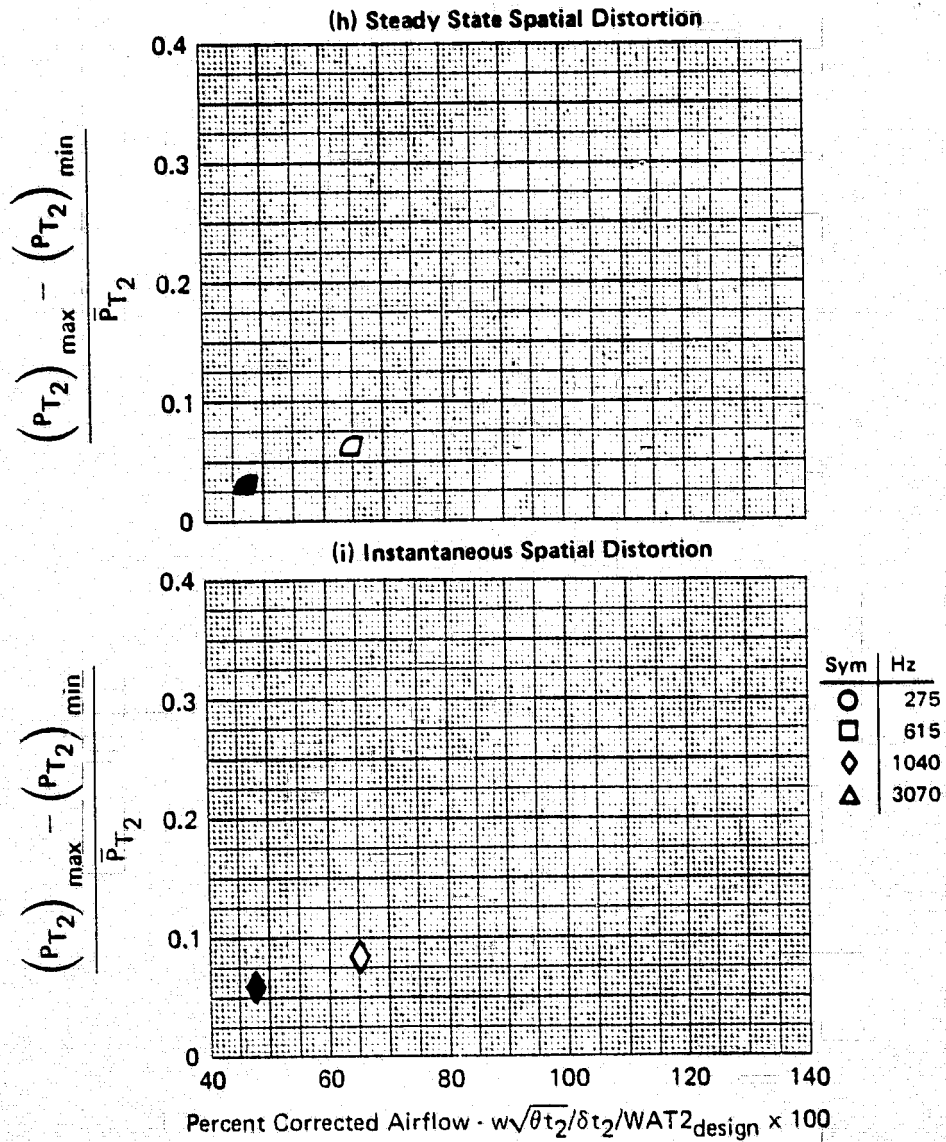


FIGURE G-74 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 47.3 \%$

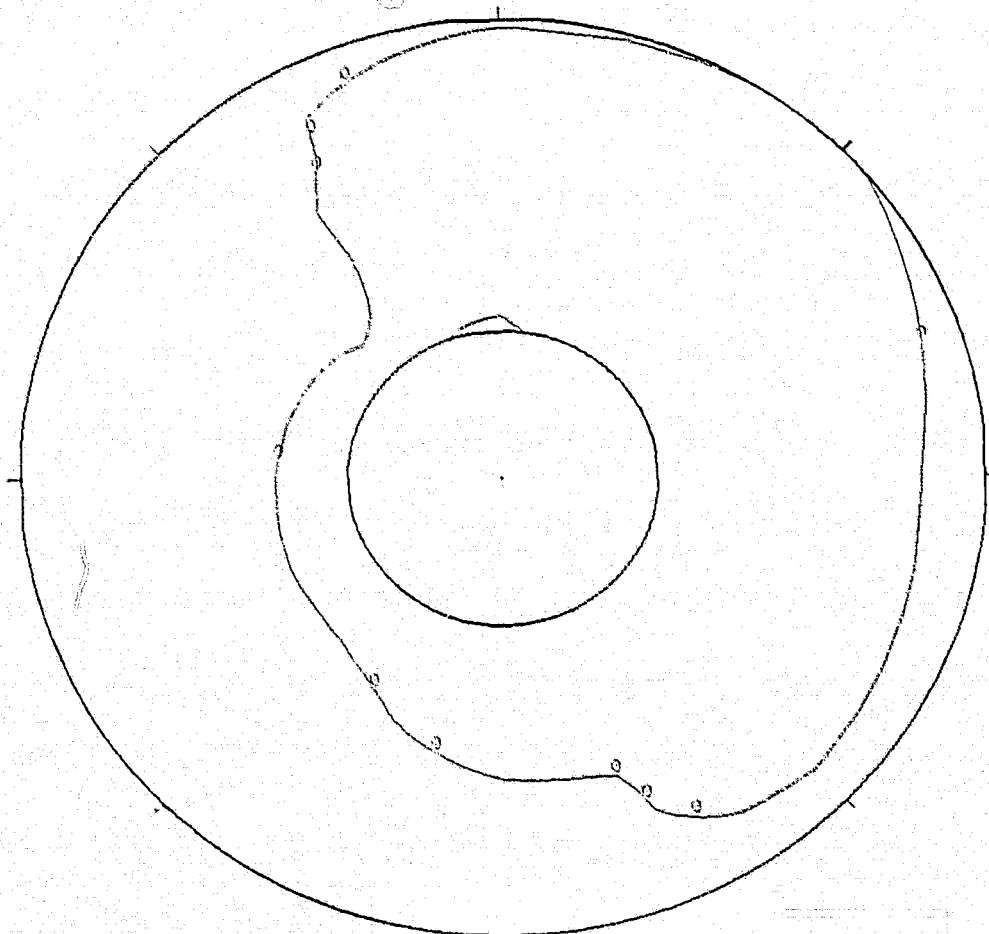
GP77-0658-4

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 252/3 IDENT. 74
THE SEGMENT START TIME WAS AT 7: 3:41.045

MACH 2.2	ALPHA 12	BETA 0	RHO 6.0	DELTA2 25.0	BYPASS 0.07742 (120.0)	WAT2 47.3%	CIVV -25.0
PI 43.93 (6.372)	PI.P3 1.000	KTHETA 0.231	KPA2 0.633	BKPA2 14.112	KQ2 14.403	KQ2 0.221	KQSP 0.246
							D2 0.031

74 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 43.93 kPa (6.372 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

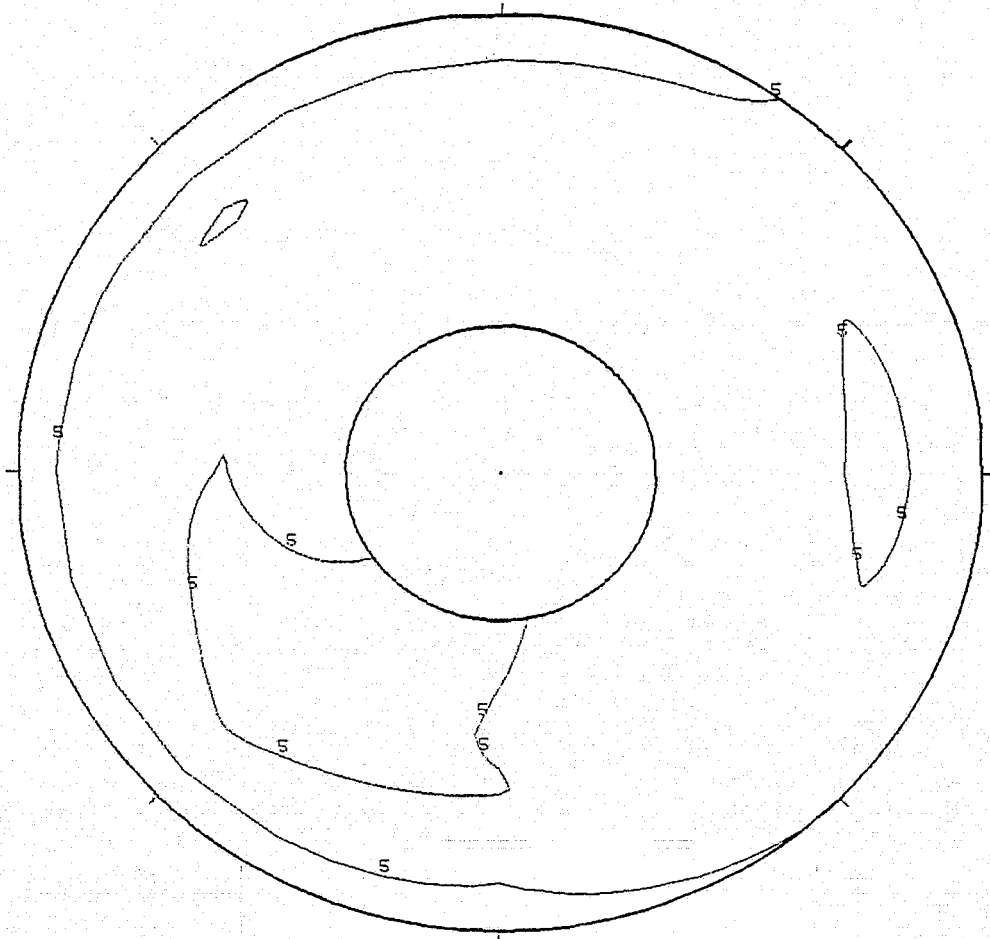
FIGURE G-74 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 47.3$ %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 252 / 3 IDENT. 74
THE SEGMENT START TIME WAS AT 7: 3:41.045

MACH	ALPHA	BETA	RHO	DEL T03	BYPASS	WAT2	CIVV
2.2	12	0	5.0	25.0	0.07742 (120.0)	47.3%	-25.0

74(k) Turbulence Contour
1040 Hz



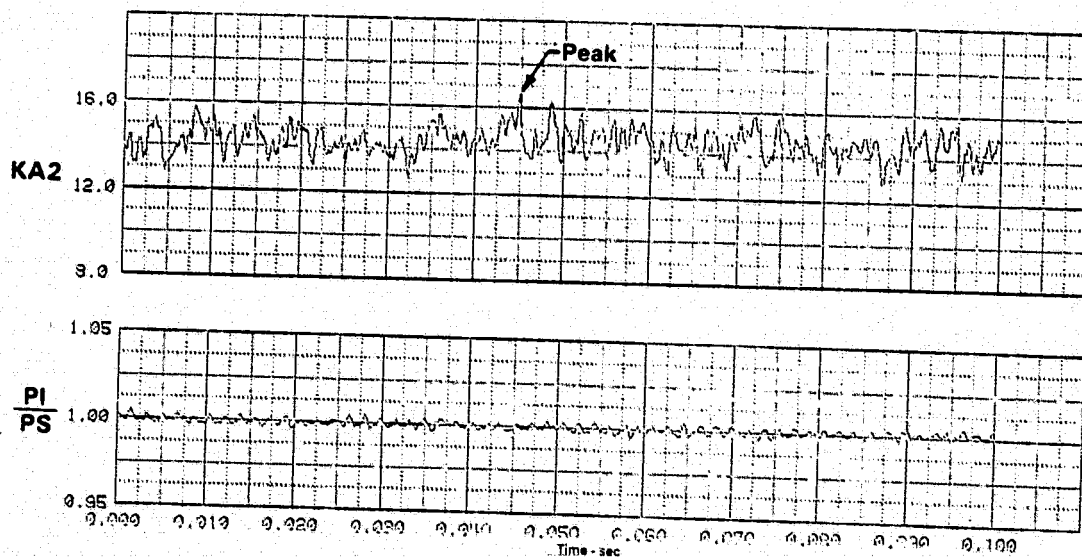
NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00438
FIGURE G-74 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 47.3\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 352 / 9 IDENT. 74
THE SEGMENT START TIME WAS AT 7: 3:41.045

MACH 2.2	ALPHA 12	BETA 0	RHO 8.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 47.3%	CIVV -25.0
PT 43.86 (6.362)	PI/PS 0.993	KTHETA 0.1394	KPA2 0.702	EKPA2 15.203	KQ2 16.612	KQ2 0.195	MUSP 0.230
							D2 0.060

74 (I) Time History Plots 1040 Hz



PEAK AT TIME = 0.044880 SECONDS

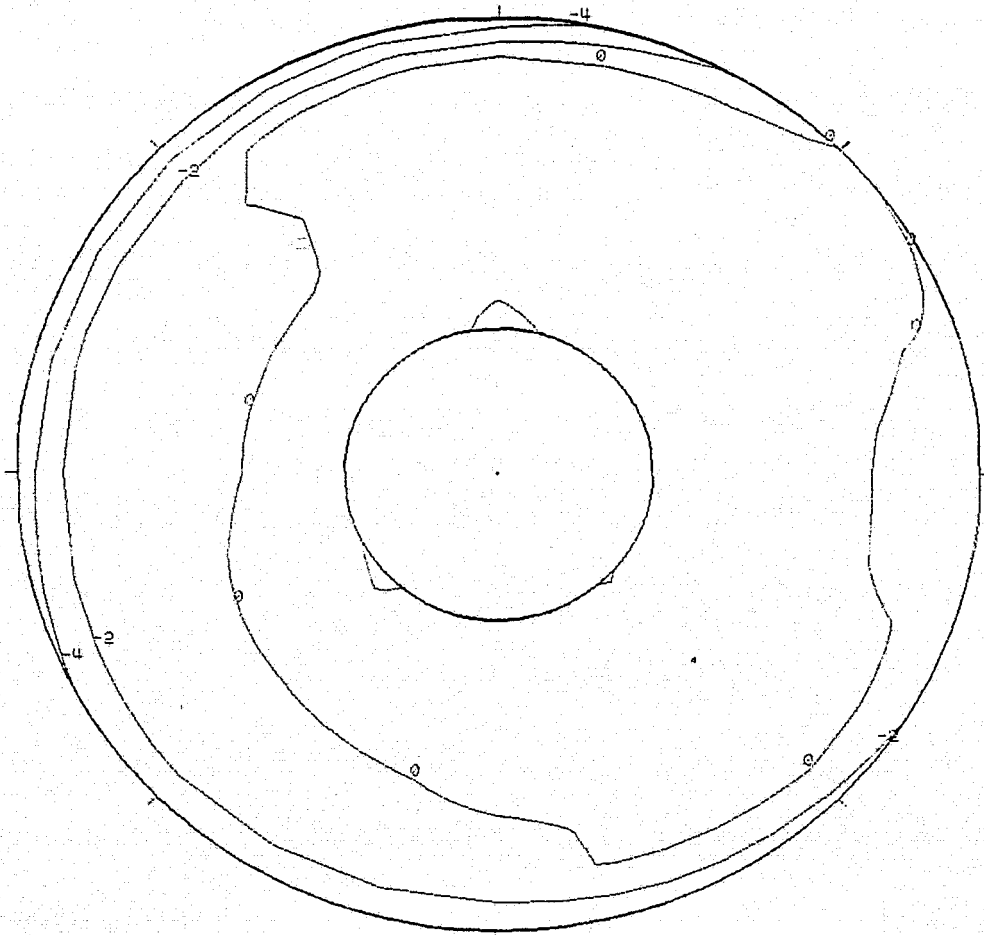
FIGURE G-74 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, WAT2 = 47.3 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 252 / 9 IDENT. 74
THE SEGMENT START TIME WAS AT 7: 3:41.045

MACH 2.2	ALPHA 12	BETA 0	RHO 0.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	HAT2 47.3%	CIVV -25.0
PI/P3 0.933	KTHETA 0.304	KPA2 0.792	BKPA2 16.303	KP2 16.812	KC2 0.195	KOSP 0.230	D2 0.060

**74(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
1040 Hz**



MEAN FACE PRESSURE = 43.86 kPa (6.362 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.044880 SECONDS

FIGURE G-74 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 47.3$ %

SERIES VIII - NASA Data Study
 Part/Point - 252/5, Ident 75
 RHO DELTA3 BYPASS CIVV
 6.0 25.0 0.077(120.0) -25.00

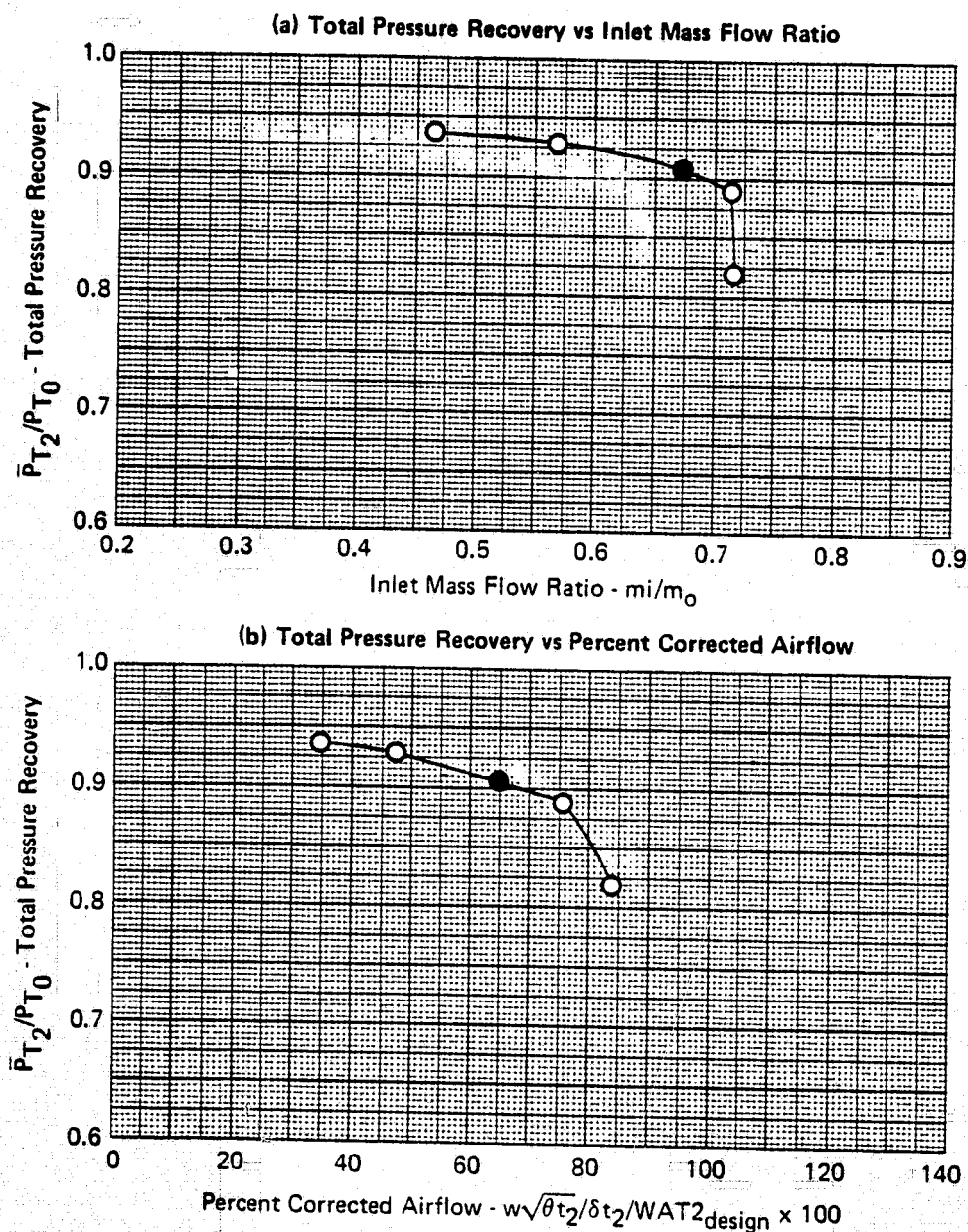
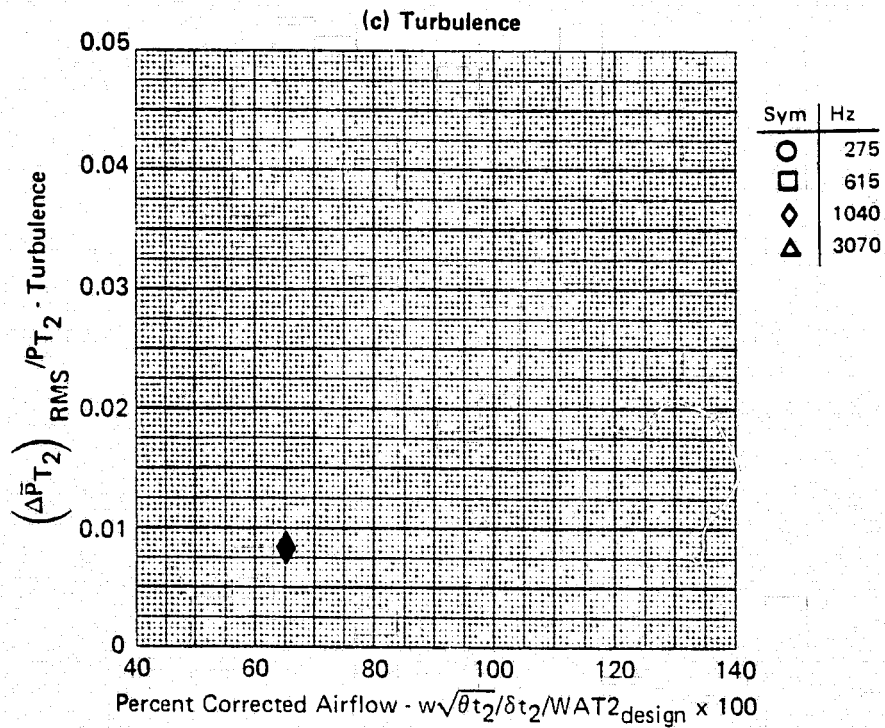


FIGURE G-75
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 65.0$ %

GP77-0658-1

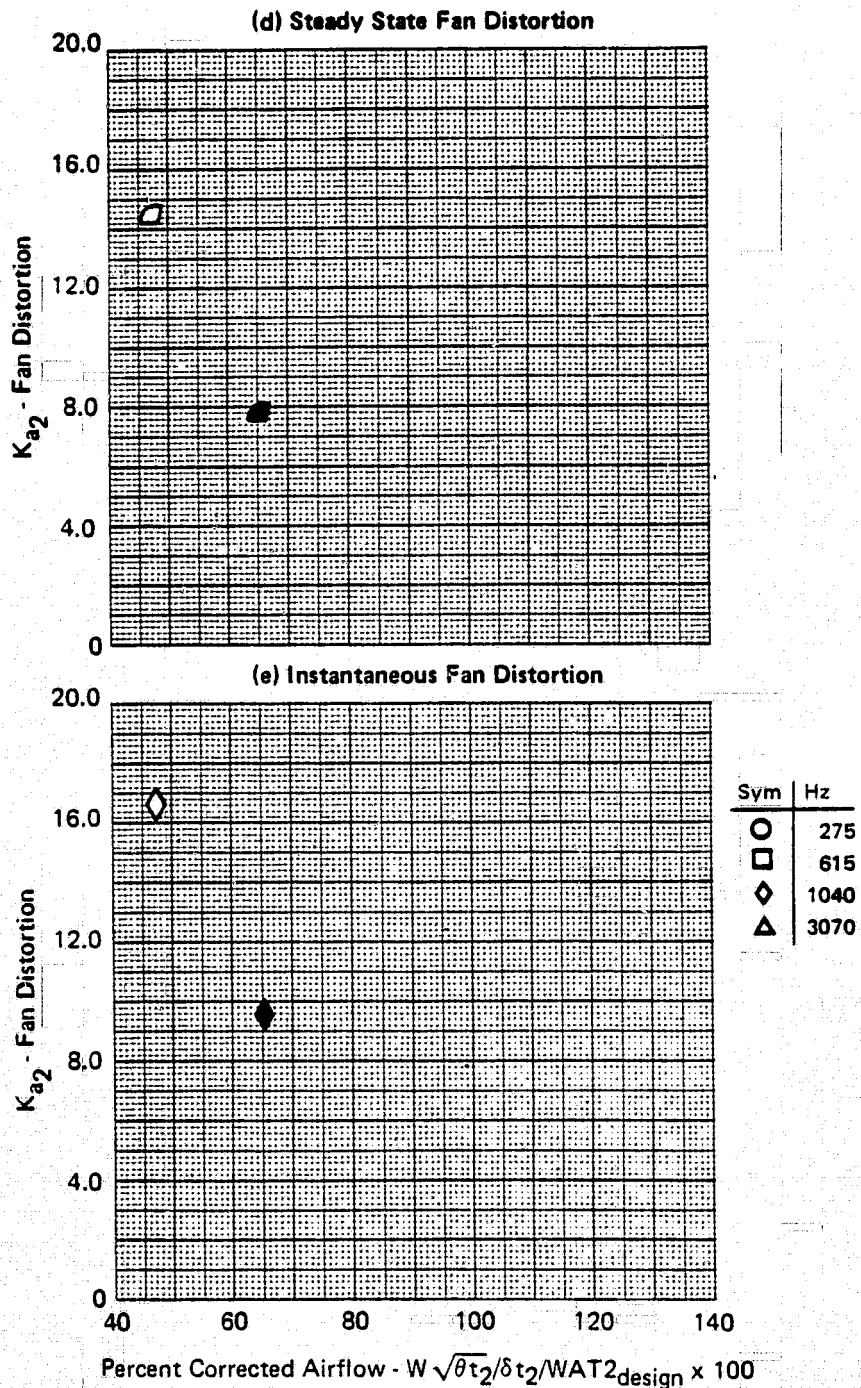
SERIES VIII - NASA Data Study
 Part/Point - 252/5, Ident 75
 RHO DELTA3 BYPASS CIVV
 6.0 25.0 0.077(120.0) -25.00



GP77-0658-5

FIGURE G-75 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 65.0\%$

SERIES VIII - NASA Data Study
 Part/Point - 252/5, Ident 75
 RHO DELTA3 BYPASS CIVV
 6.0 25.0 0.077(120.0) -25.00



GP77-0658-3

FIGURE G-75 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 65.0$ %

SERIES VIII - NASA Data Study
 Part/Point - 252/5, Ident 75
 RHO DELTA3 BYPASS CIVV
 6.0 25.0 0.077(120.0) -25.00

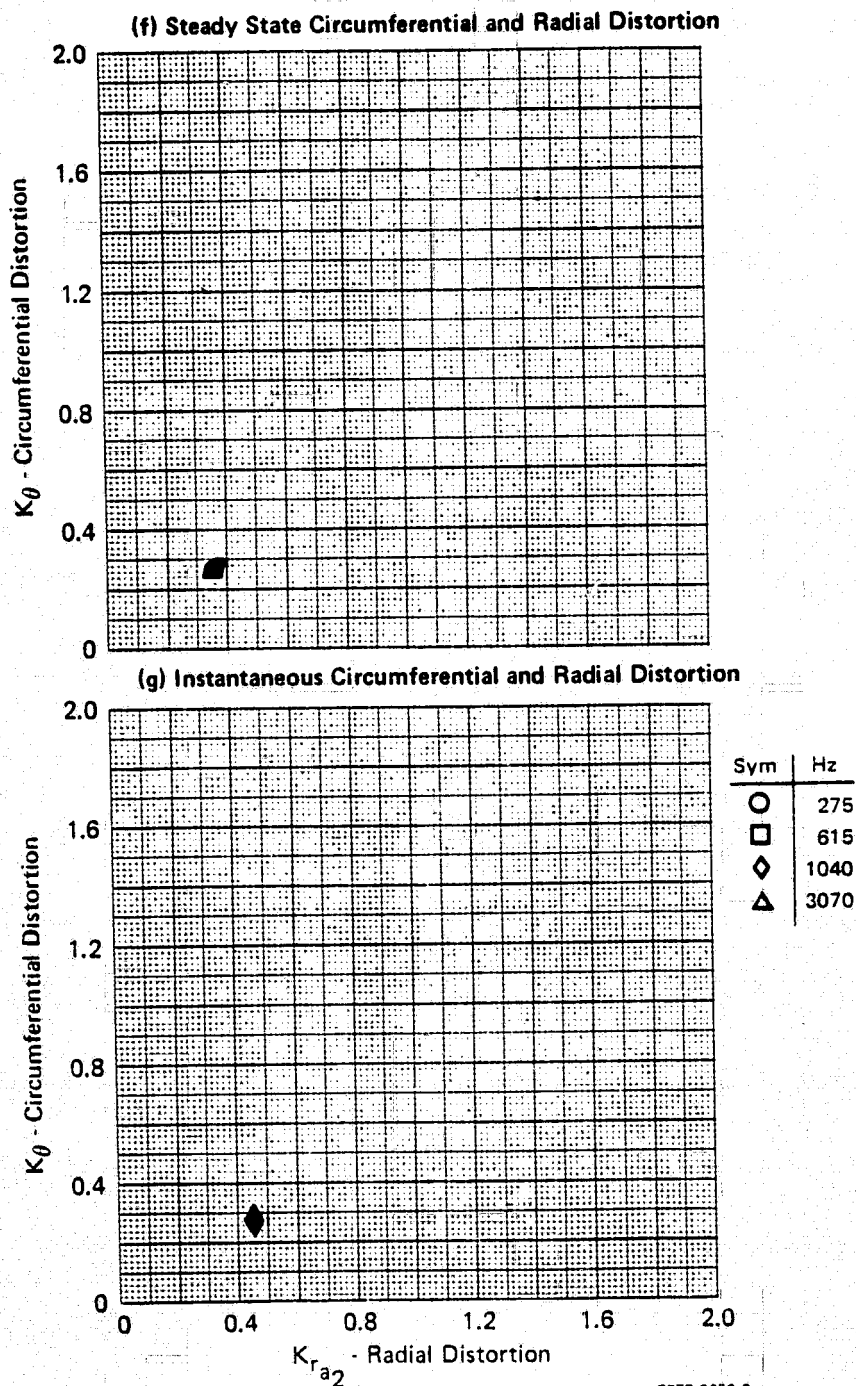


FIGURE G-75 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, WAT2 = 65.0 %

SERIES VIII - NASA Data Study
 Part/Point - 252/5, Ident 75
 RHO DELTA3 BYPASS CIVV
 6.0 25.0 0.077(120.0) -25.00

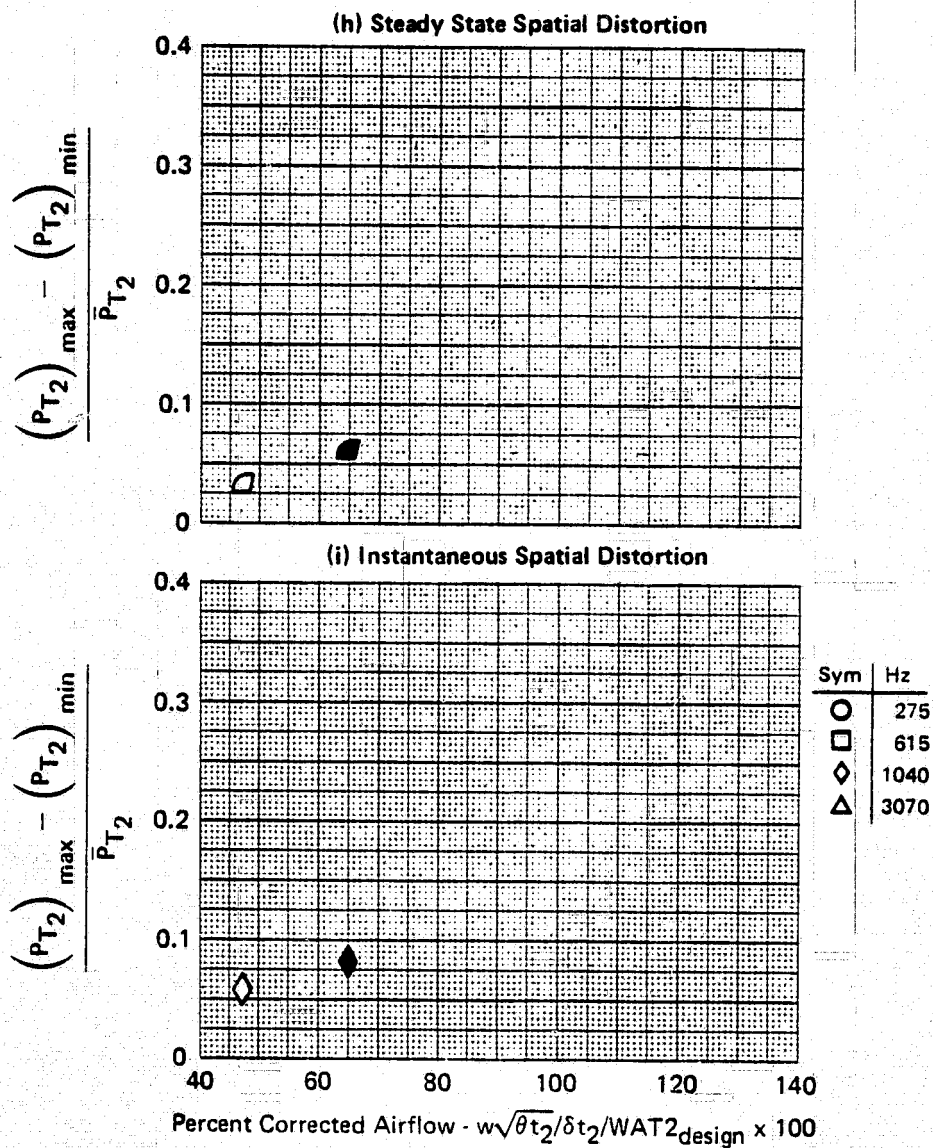


FIGURE G-75 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 65.0 \%$

G077-0658-4

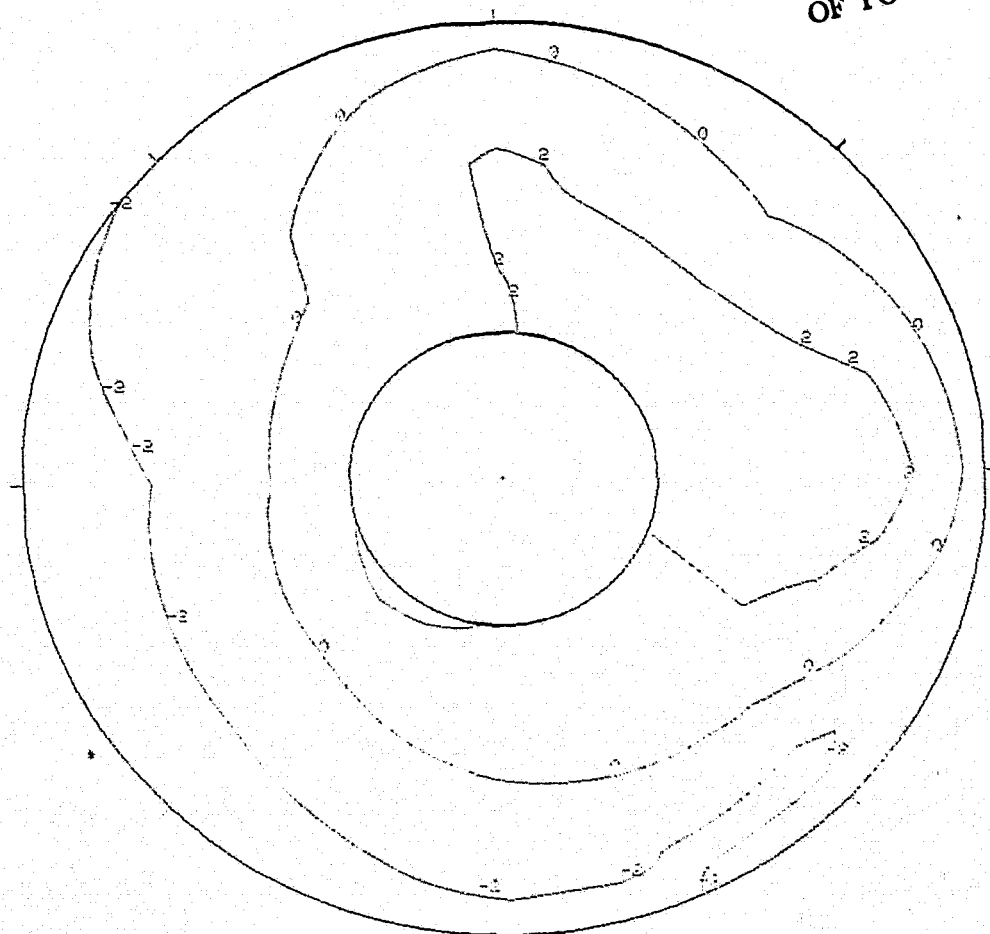
SERIES VIII - NASA DATA STUDY

DATA PART/POINT 252 / 5 IDENT. 75
THE SEGMENT START TIME WAS AT 6:57:52.045

MACH 2.2	ALPHA 12	BETA 0	PHI 6.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 65.0%	CIVV -25.0
PI 42.70 (6.193)	PI/PS 1.000	KTHETA 0.259	KP33 0.360	BK33 7.111	K23 7.713	KCS 0.212	KOSP 0.202
							DS 0.001

75 (j) Steady State Total Pressure Contour

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OF POOR QUALITY.



MEAN FACE PRESSURE = 42.70 kPa (6.193 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

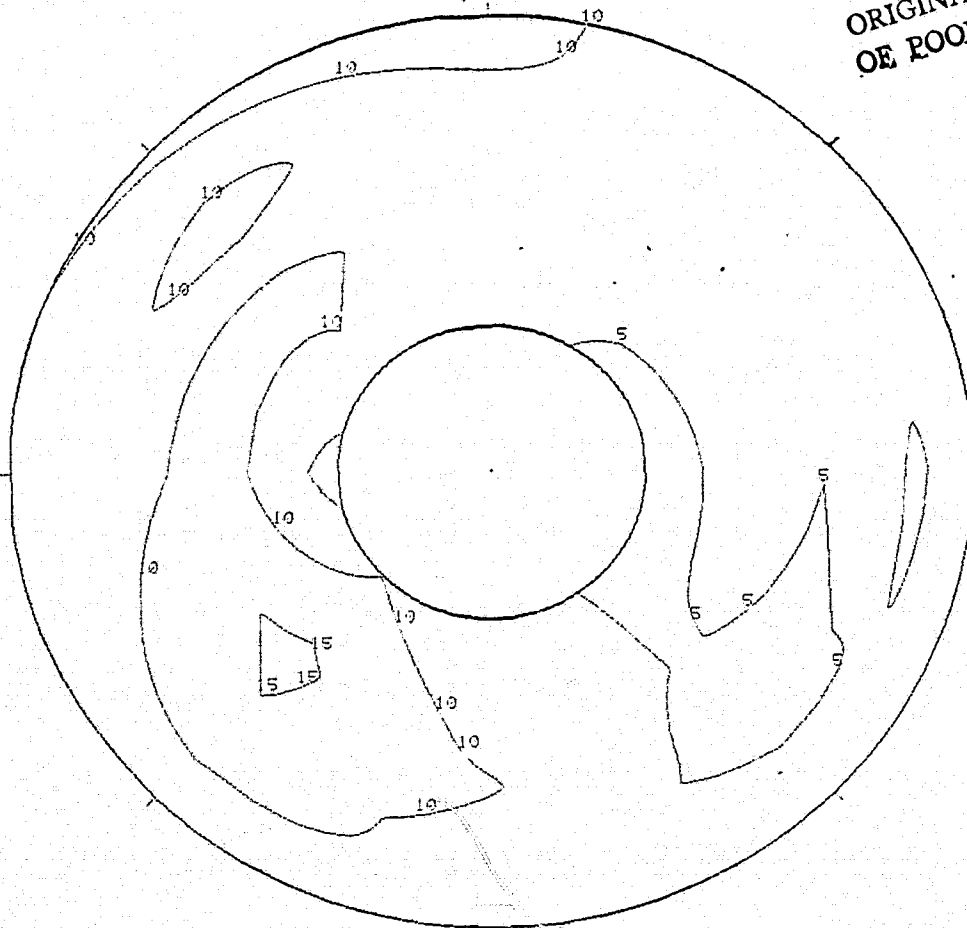
FIGURE G-75 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, WAT2 = 65.0 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 252 / 5 IDENT. 75
THE SEGMENT START TIME WAS AT 6:57:52.045

MACH	ALPHA	BETA	PHI	DELTA	BYPASS	WAT2	CIVV
2.2	13	0	6.0	25.0	0.07742 (120.0)	65.0%	-25.0

75(k) Turbulence Contour
1040 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00837

FIGURE G-75 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 65.0$ %

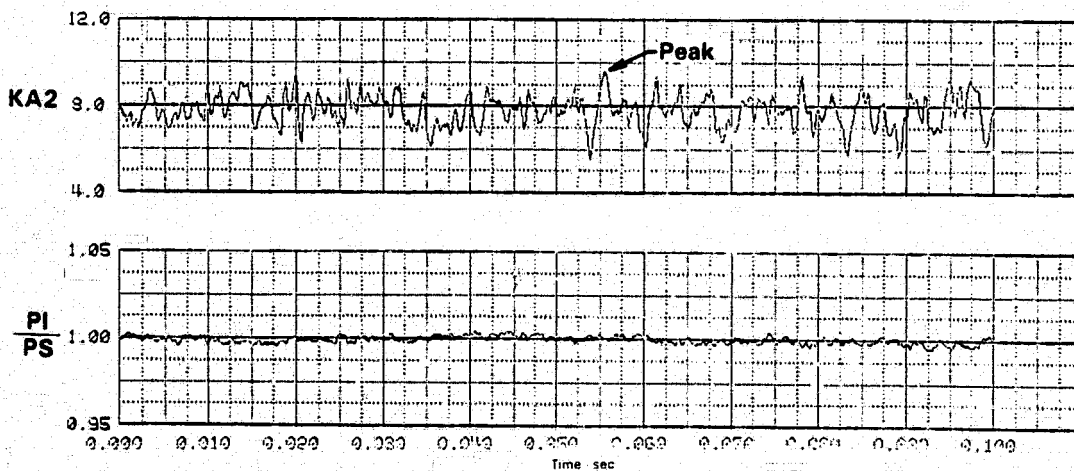
SERIES VIII - NASA DATA STUDY

DATA PART/POINT 252 / 5 IDENT. 75
THE SEGMENT START TIME WAS AT 6:57:52.045

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OF POOR QUALITY

MACH 2.2	ALPHA 12	BETA 0	RHO 6.0	DELTA3 25.0	ENPA23 0.07742 (120.0)	WAT2 65.0%	CLVV -25.0
P1 42.71 (0.195)	PI/PS 1.000	KTHETA 0.381	KPA2 0.449	BKPA2 9.309	KQ2 9.559	KQ3P 0.269	D2 0.023

75 (I) Time History Plots 1040 Hz



PEAK AT TIME = 0.055605 SECONDS

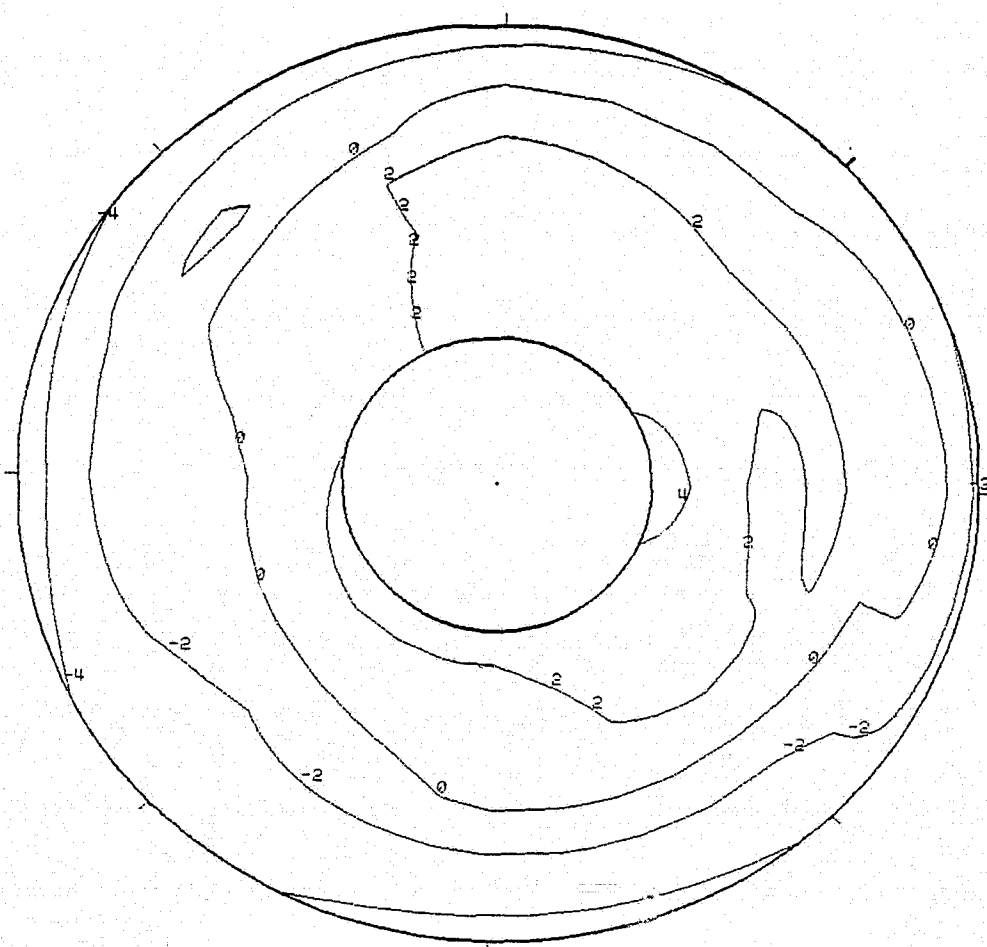
FIGURE G-75 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 65.0$ %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 252 / 5 IDENT. **75**
 THE SEGMENT START TIME WAS AT 6:57:52.045

MACH 2.2	ALPHA 12	BETA 0	RHO 6.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 65.0%	CIVV -25.0
42.71 (6.195)	PI/PS 1.000	KTHETA 0.281	KRA2 0.449	EKRA2 9.309	KA2 9.589	KD2 0.255	KOSP 0.269
							D2 0.023

**75(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
 1040 Hz.**



MEAN FACE PRESSURE = 42.71 kPa (6.195 PSIA)
 NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
 FROM MEAN FACE PRESSURE
 PEAK AT TIME = 0.055605 SECONDS

FIGURE G-75 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 65.0$ %

FSCP - NASA Data Study
 Part/Point - 384/2, Ident 76
 RHO DELTA3 BYPASS CIVV
 6.8 25.0 0.077(120.0) -25.00

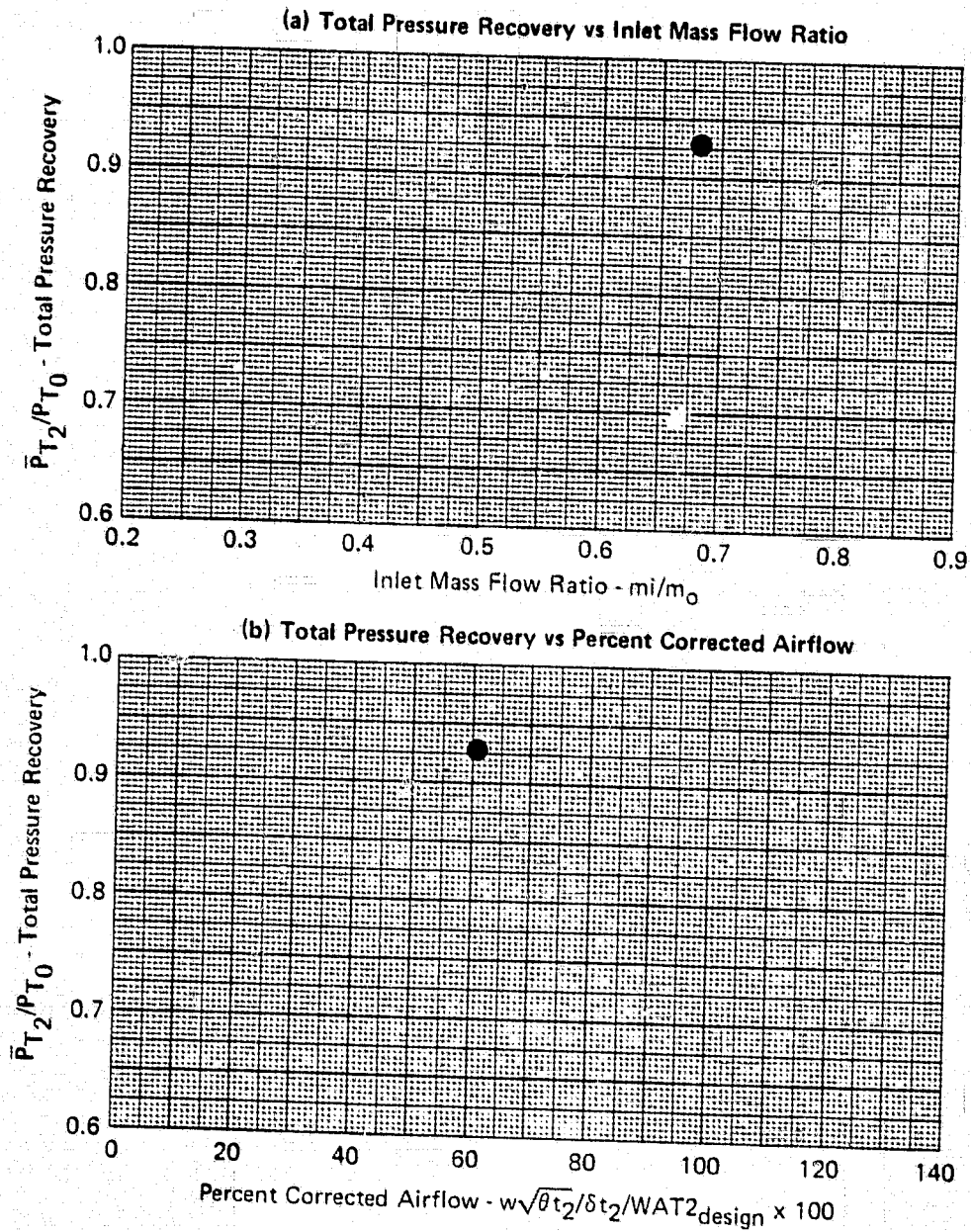
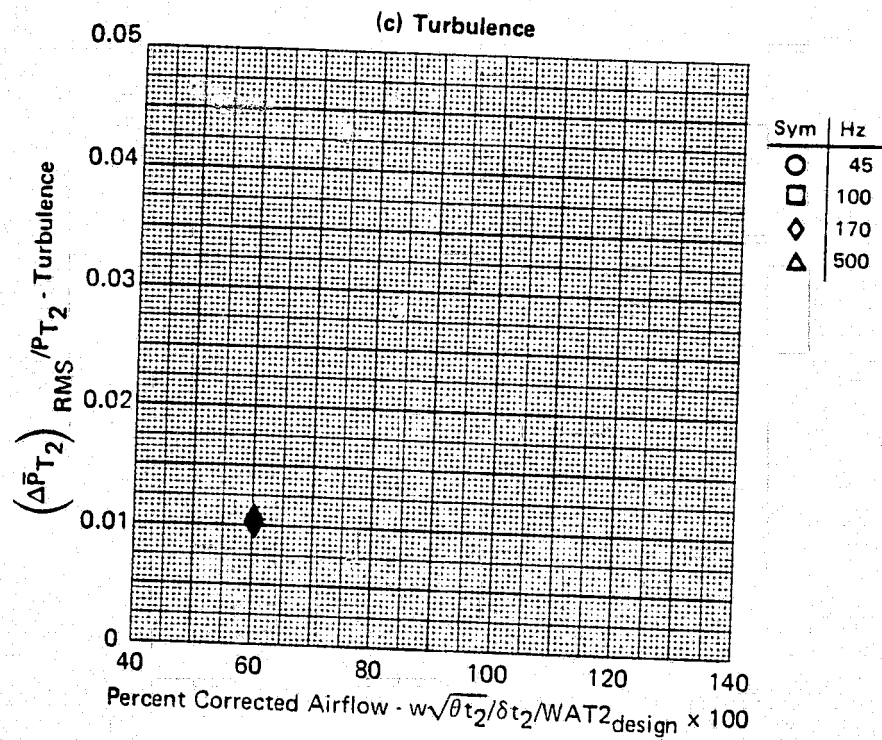


FIGURE G-76
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = 12.0, \beta = 0.0, WAT2 = 60.8 \%$

GP77-0658-1

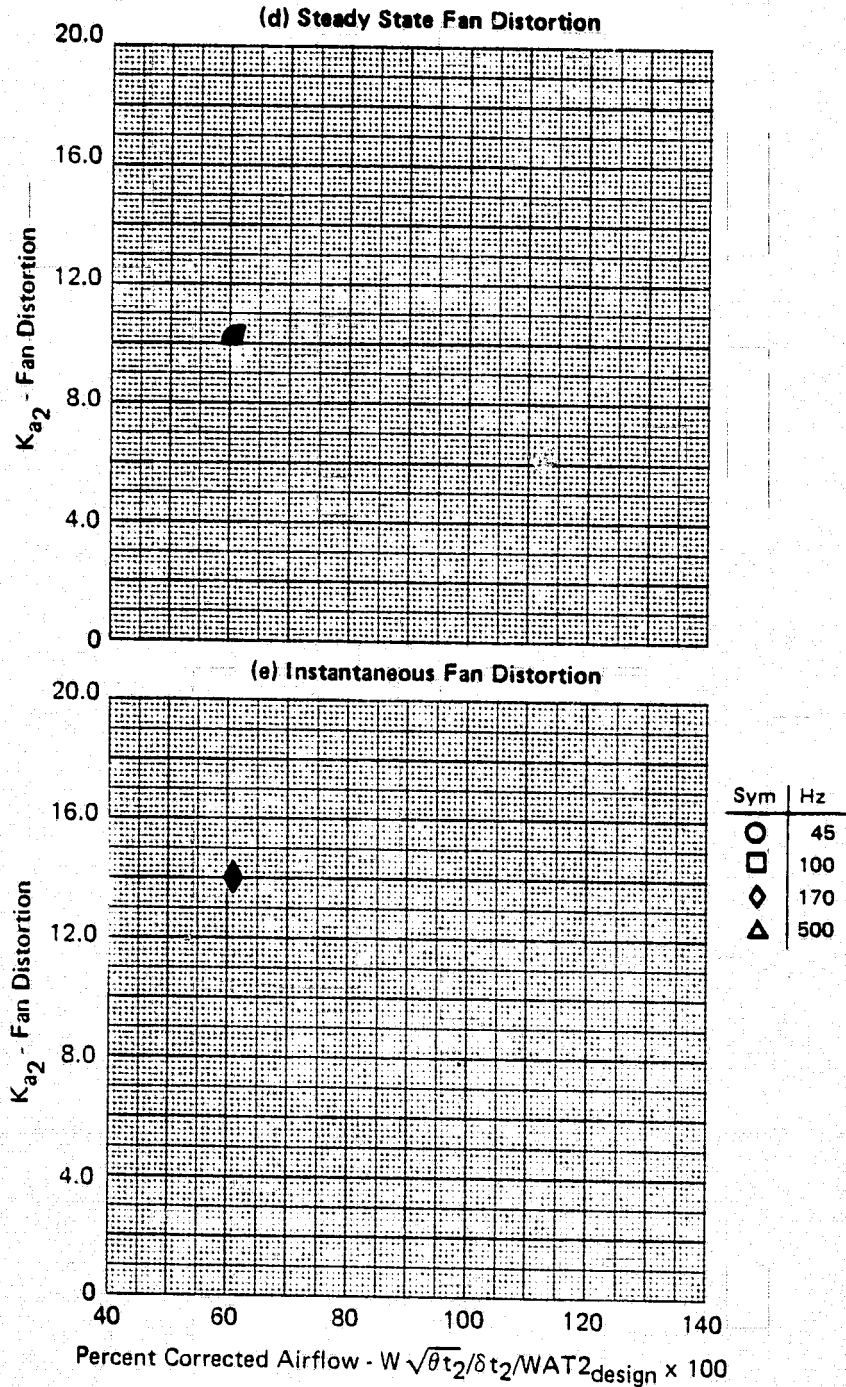
FSCP - NASA Data Study
 Part/Point - 384/2, Ident 76
 RHO DELTA3 BYPASS CIVV
 6.8 25.0 0.077(120.0) -25.00



GP77-0658-5

FIGURE G-76 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 60.8\%$

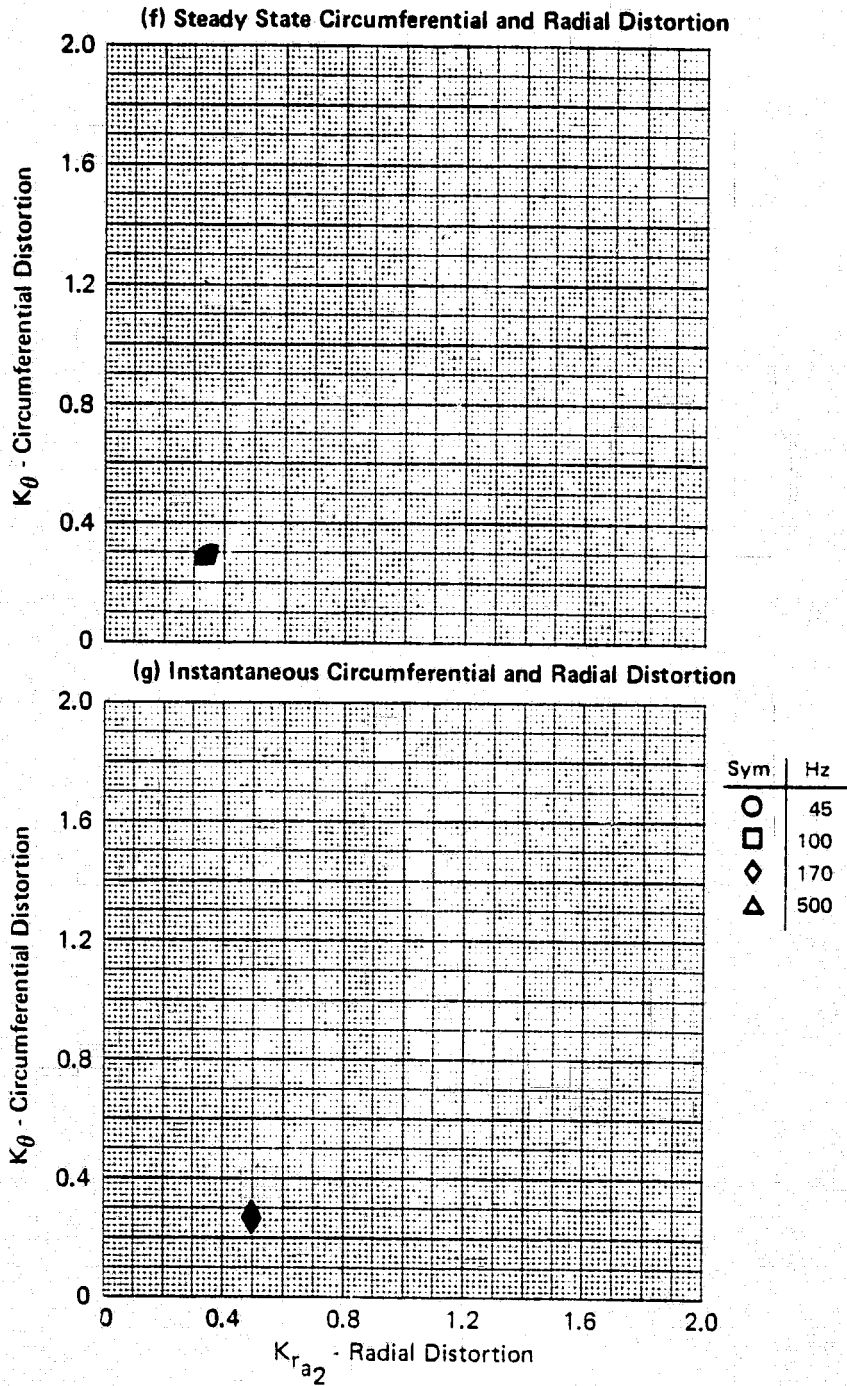
FSCP - NASA Data Study
 Part/Point - 384/2, Ident 76
 RHO DELTA3 BYPASS CIVV
 6.8 25.0 0.077(120.0) -25.00



GP77-0658-3

FIGURE G-76 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 60.8 \%$

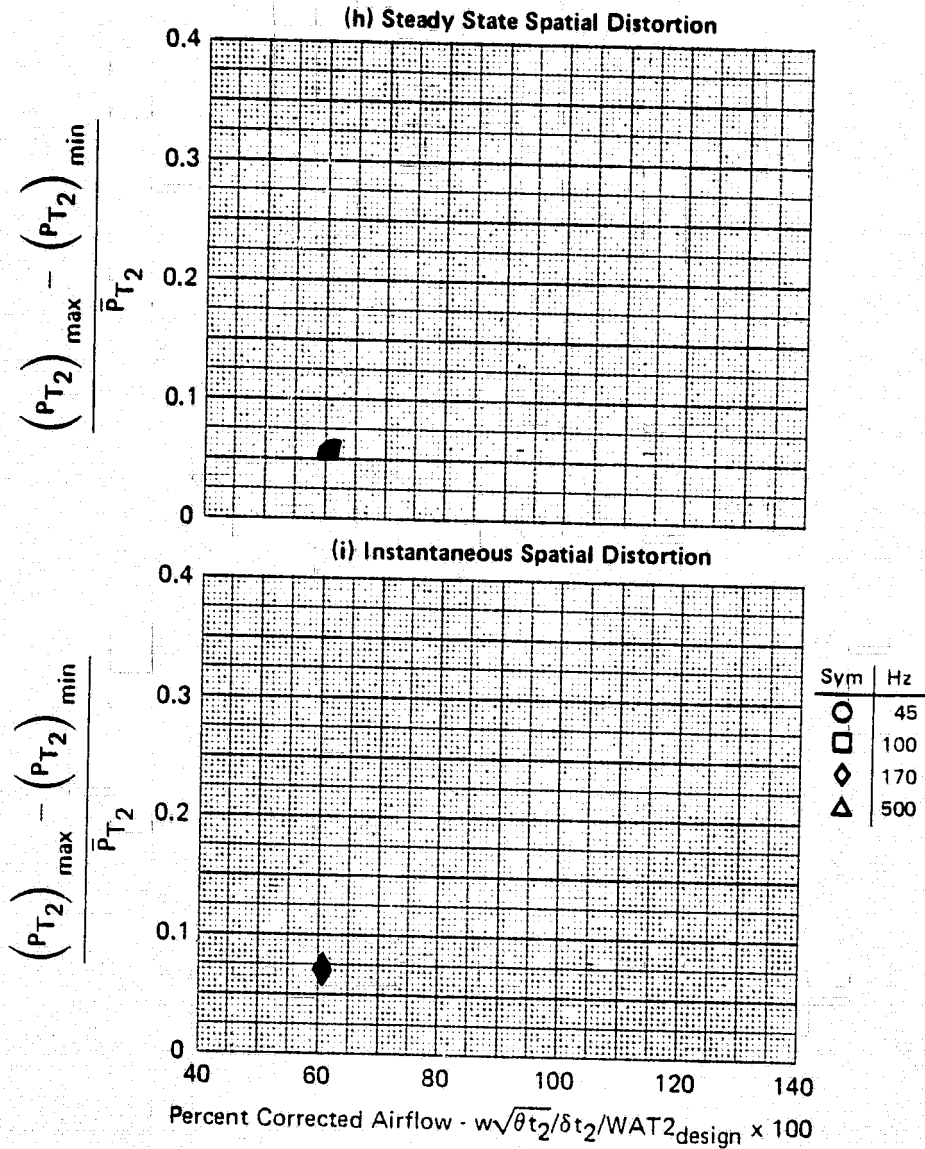
FSCP - NASA Data Study
 Part/Point - 384/2, Ident 76
 RHO DELTA3 BYPASS CIVV
 6.8 25.0 0.077(120.0) -25.00



GP77-0658-2

FIGURE G-76 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = 12.0, \beta = 0.0, WAT2 = 60.8 \%$

FSCP - NASA Data Study
 Part/Point - 384/2, Ident 76
 RHO DELTA3 BYPASS CIVV
 6.8 25.0 0.077(120.0) -25.00



GP77-0658-4

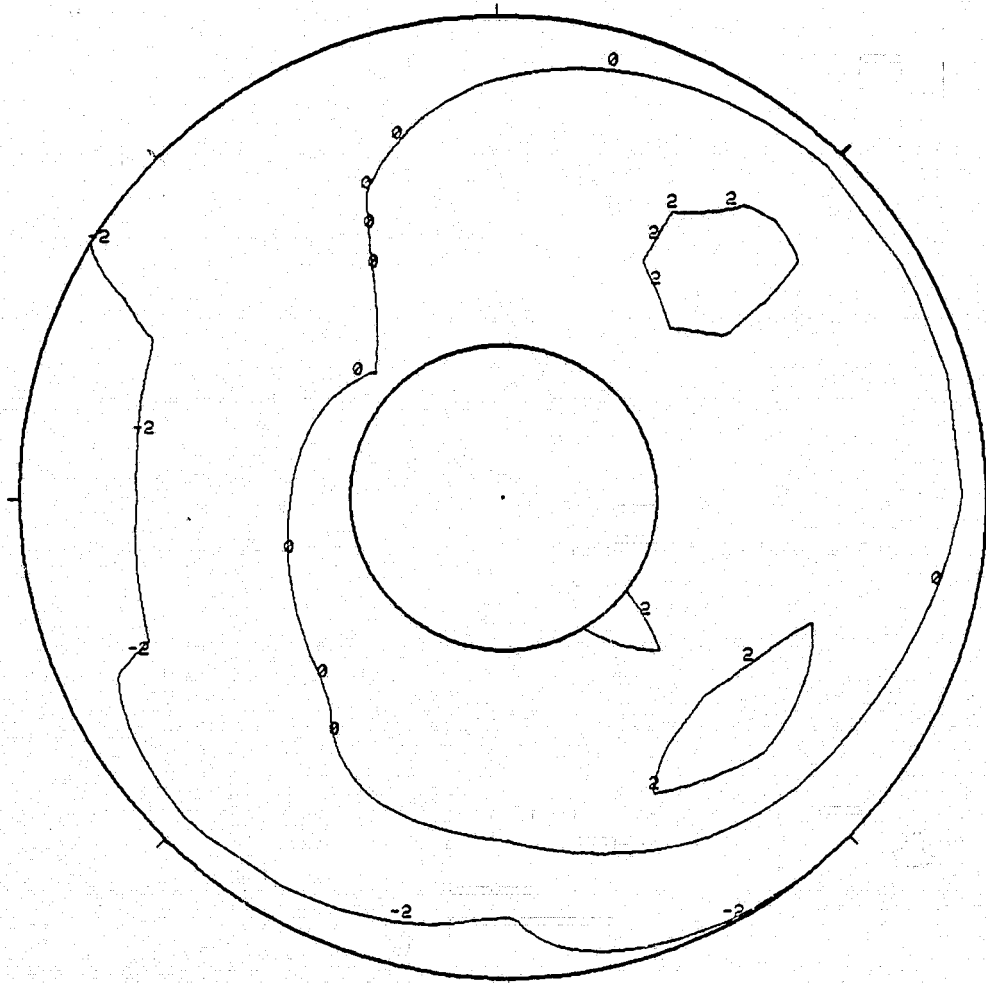
FIGURE G-76 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 60.8\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 384 / 2 IDENT. 76
THE SEGMENT START TIME WAS AT 1:21:54.091

MACH 2.2	ALPHA 12	BETA 0	RHO 6.8	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 60.8%	CIVV -25.0
PI 44.58 (6.466)	PI/PS 1.000	KTHETA 0.292	KRA2 0.349	BKRA2 9.880	KA2 10.173	KC2 0.271	KESP 0.258
							D2 0.056

76 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 44.58 kPa (6.466 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

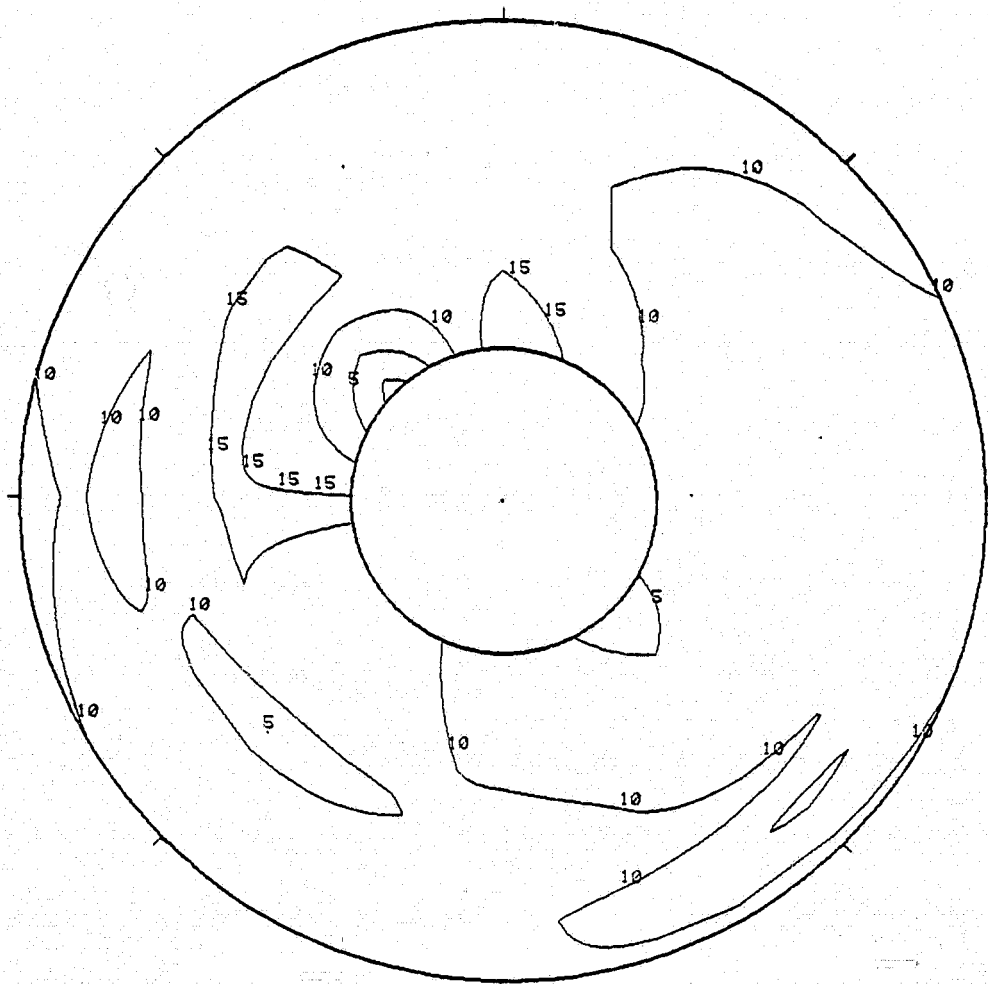
FIGURE G-76 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, WAT2 = 60.8 %

FSCP - NASA DATA STUDY

DATA PART/POINT 384 / 2 IDENT. 76
THE SEGMENT START TIME WAS AT 1:21:54.031

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
2.2	12	0	5.8	25.0	0.07742 (120.0)	60.8%	-25.0

76(k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01049

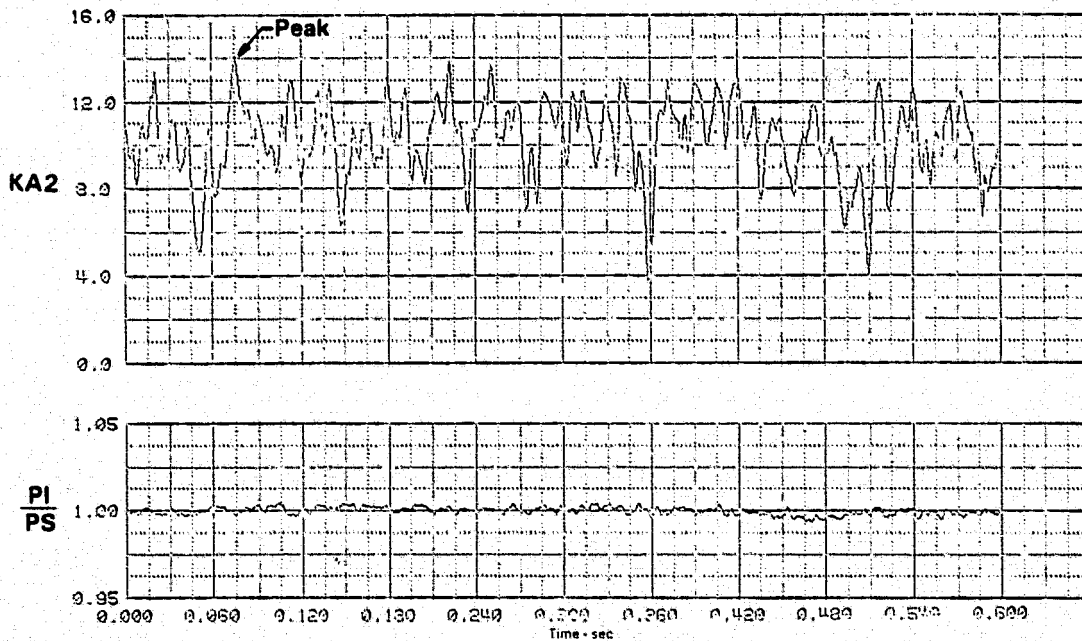
FIGURE G-76 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 60.8\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 384 / 2 IDENT. 76
THE SEGMENT START TIME WAS AT 1:21:54.091

MACH 2.2	ALPHA 12	BETA 0	RHO 6.8	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 60.8%	CIVV -25.0
PI 44.52 (6.457)	PI/PS 0.999	KTHETA 0.276	KRA2 0.437	BKRA2 13.790	KA2 14.065	KC2 0.217	KOSP 0.199
							D2 0.071

76 (I) Time History Plots 170 Hz



PEAK AT TIME = 0.075740 SECONDS

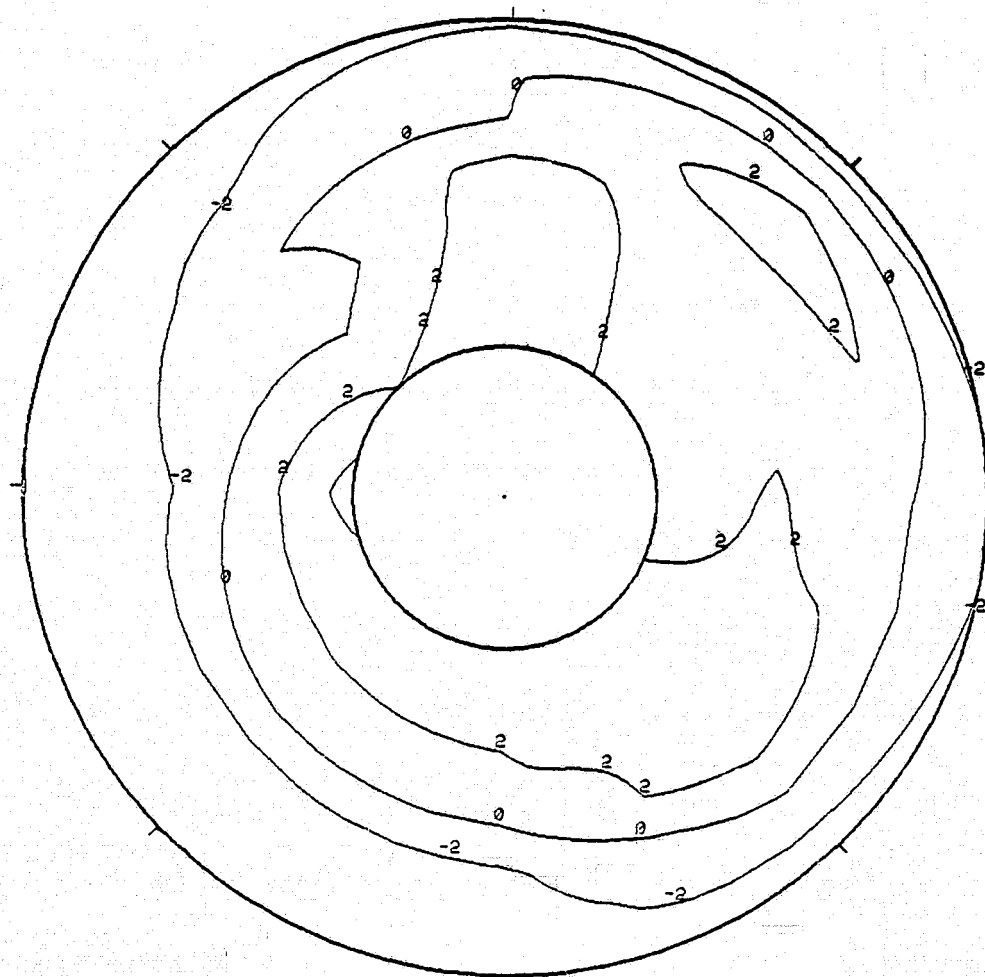
FIGURE G-76 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, WAT2 = 60.8 %

FSCP - NASA DATA STUDY

DATA PART/POINT 384 / 2 IDENT. 76
THE SEGMENT START TIME WAS AT 1:21:54.091

MACH 2.2	ALPHA 12	BETA 0	RHO 6.8	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 60.8%	CIVV -25.0
PI 44.52 (6.457)	P1/PS 0.999	KTHETA 0.276	KRA2 0.487	BKRA2 13.790	KA2 14.065	KC2 0.217	KOSP 0.189
							D2 0.071

76(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 44.52 kPa (6.457 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.075740 SECONDS

FIGURE G-76 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 12.0$, $\beta = 0.0$, $WAT2 = 60.8$ %

FSE - NASA Data Study
 Part/Point - 548/3, Ident 77
 RHO DELTA3 BYPASS CIVV
 6.8 24.8 0.077(120.0) -25.00

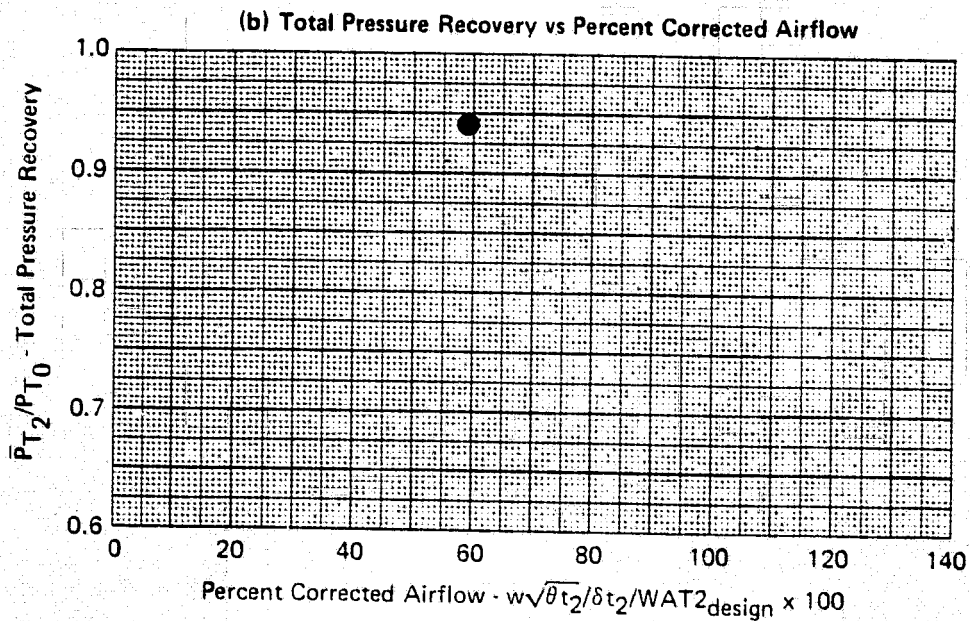
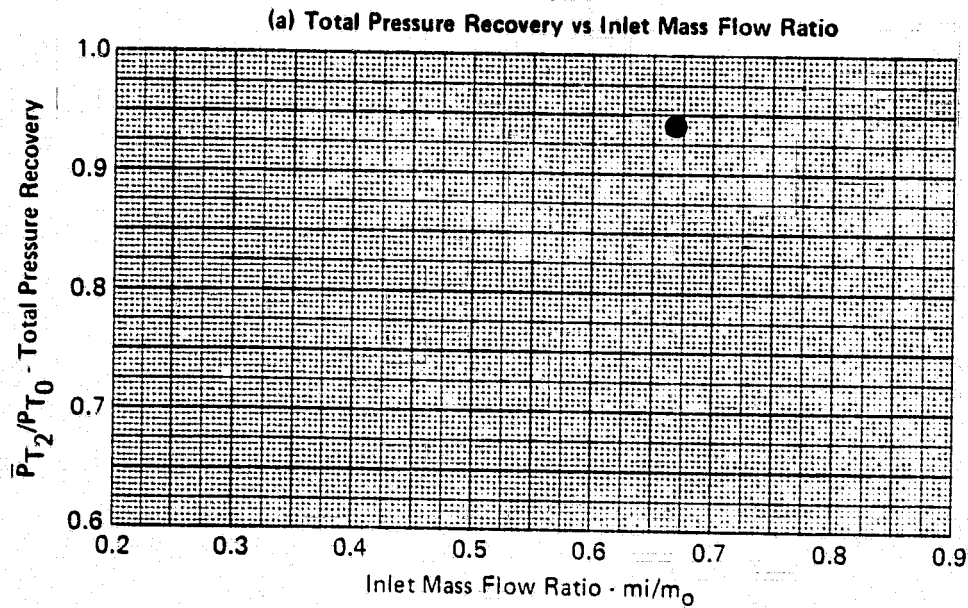
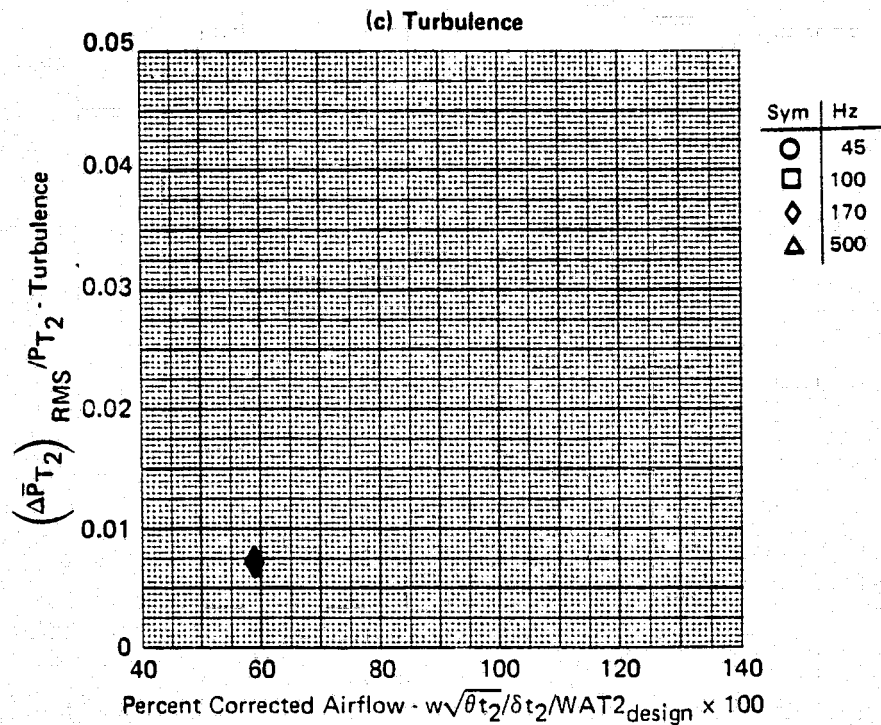


FIGURE G-77
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = 11.0, \beta = 0.0, WAT2 = 59.0 \%$

GP77-0658-1

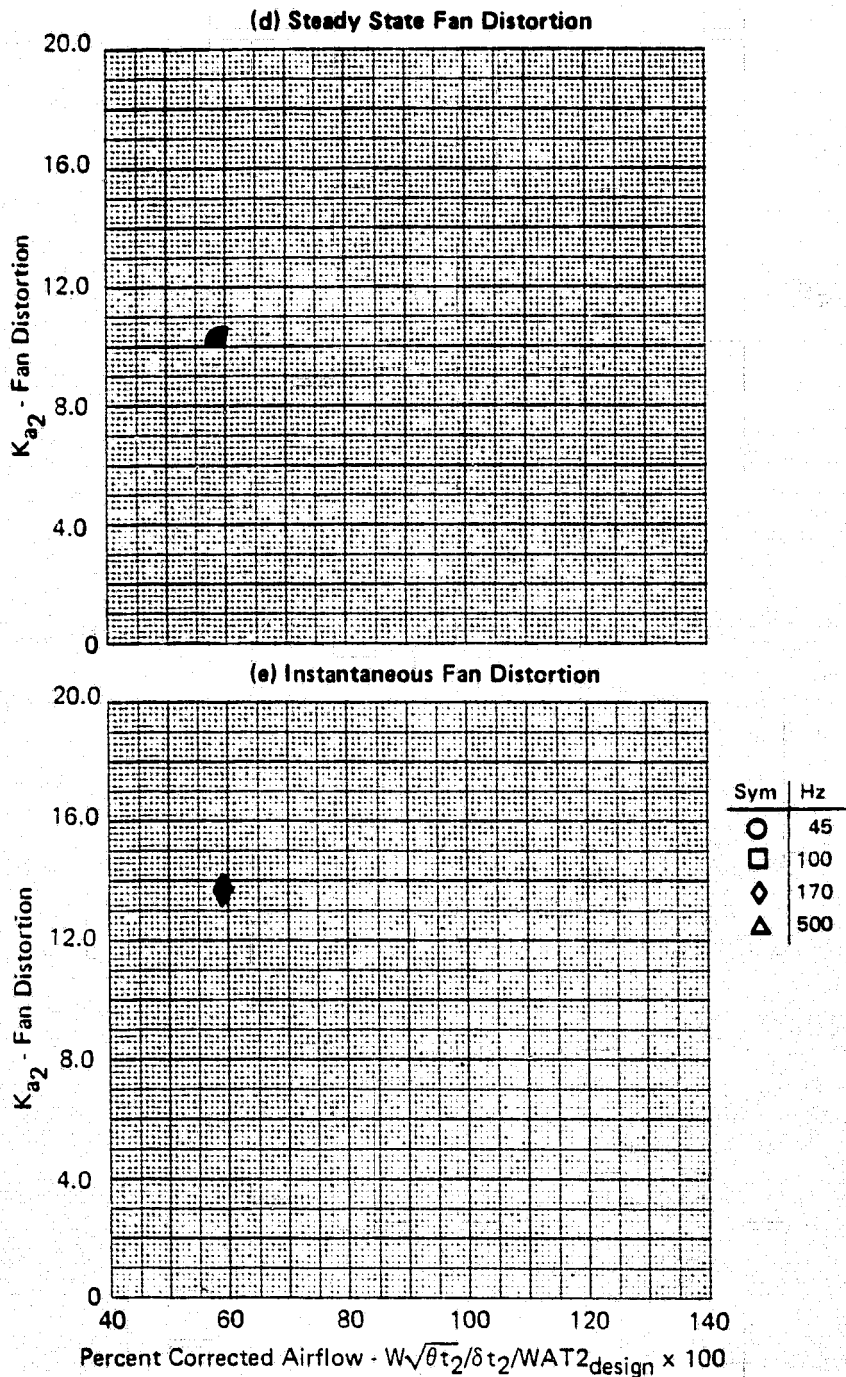
FSE - NASA Data Study
 Part/Point - 548/3, Ident 77
 RHO DELTA3 BYPASS CIVV
 6.8 24.8 0.077(120.0) -25.00



GP77-0858-5

FIGURE G-77 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, $WAT2 = 59.0\%$

FSE - NASA Data Study
 Part/Point - 548/3, Ident 77
 RHO DELTA3 BYPASS CIVV
 6.8 24.8 0.077(120.0) -25.00



GP77-0658-3

FIGURE G-77 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, $WAT2 = 59.0\%$

FSE - NASA Data Study

Part/Point - 548/3, Ident 77

RHO DELTA3 BYPASS CIVV
6.8 24.8 0.077(120.0) -25.00

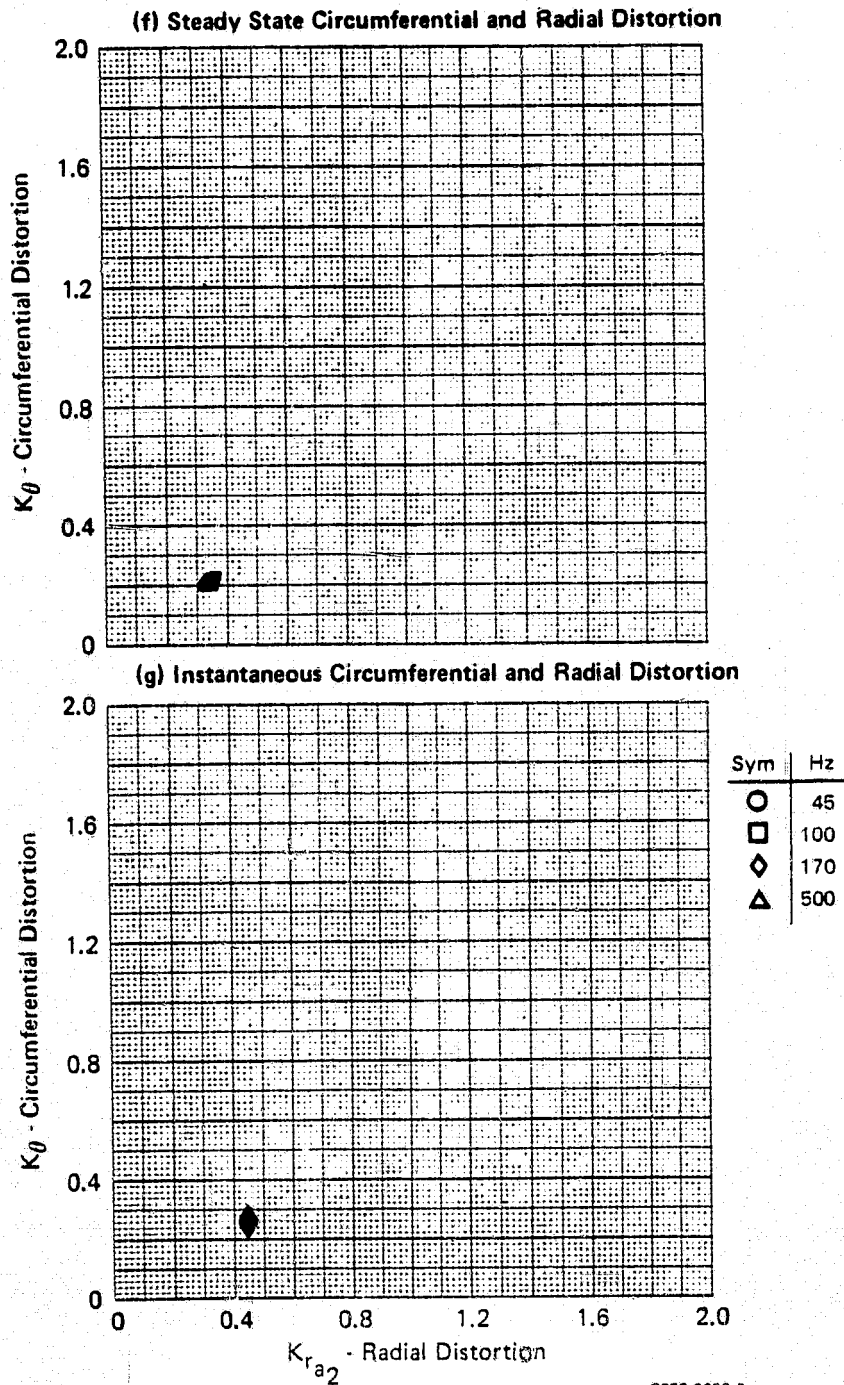


FIGURE G-77 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, WAT2 = 59.0 %

FSE - NASA Data Study
 Part/Point - 548/3, Ident 77
 RHO DELTA3 BYPASS CIVV
 6.8 24.8 0.077(120.0) -25.00

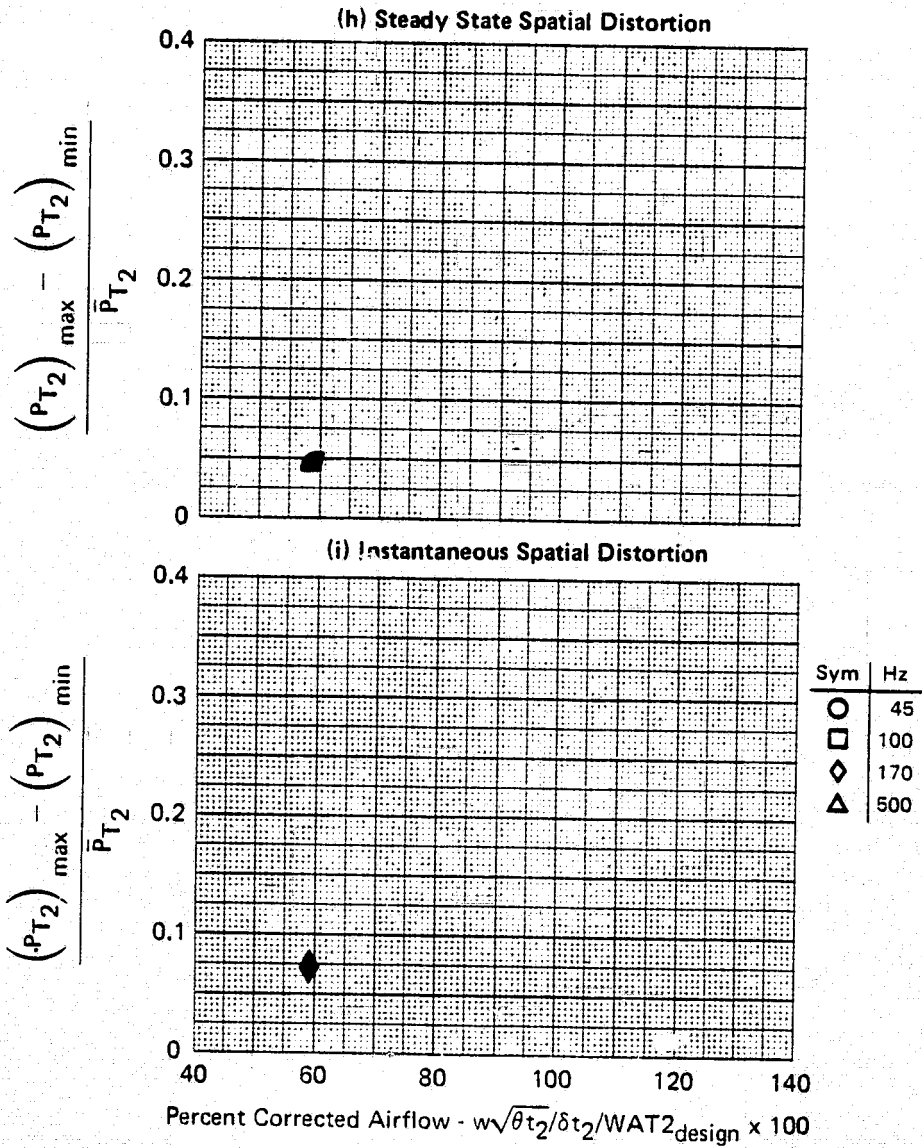


FIGURE G-77 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, $WAT2 = 59.0\%$

GP77-0658-4

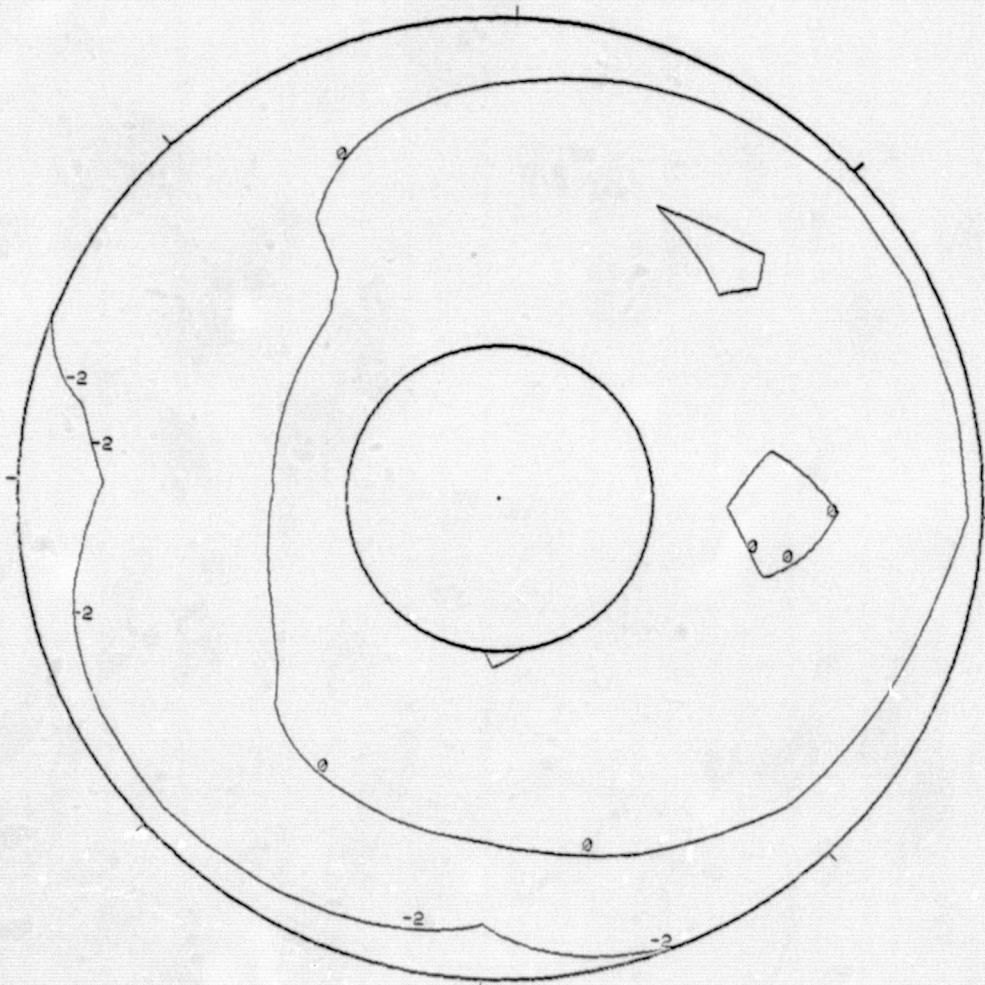
C-11

FSE - NASA DATA STUDY

DATA PART/POINT 548 / 3 IDENT. 77
THE SEGMENT START TIME WAS AT 0:19:28.091

MACH 2.2	ALPHA 11	BETA 0	RHO 6.8	DELTA3 24.8	BYPASS 0.07742 (120.0)	WAT2 59.0%	CIVV -25.0
PI 56.74 (8.229)	PI/PS 1.000	KTHETA 0.206	KRA2 0.340	BKRA2 10.113	KA2 10.319	KC2 0.177	KASP 0.154
							D2 0.045

77 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 56.74 kPa (8.229 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

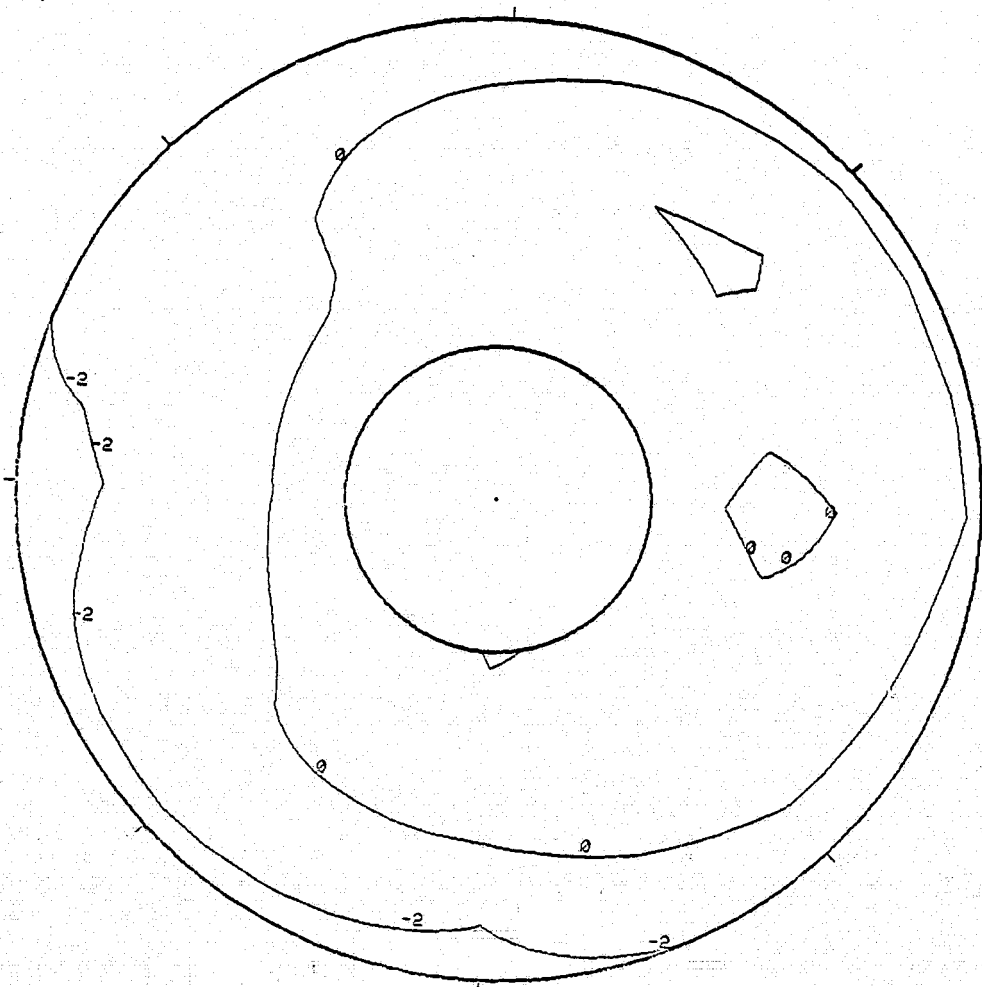
FIGURE G-77 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, WAT2 = 59.0 %

FSE - NASA DATA STUDY

DATA PART/POINT 548 / 3 IDENT. 77
THE SEGMENT START TIME WAS AT 0:19:28.091

MACH 2.2	ALPHA 11	BETA 0	RHO 6.8	DELTA3 24.8	BYPASS 0.07742 (120.0)	WAT2 59.0%	CIVV -25.0
P1 56.74 (8.229)	PI/PS 1.000	KTHETA 0.206	KRA2 0.340	EKRA2 10.113	KA2 10.319	KC2 0.177	KESP 0.154
							D2 0.045

77 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 56.74 kPa (8.229 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

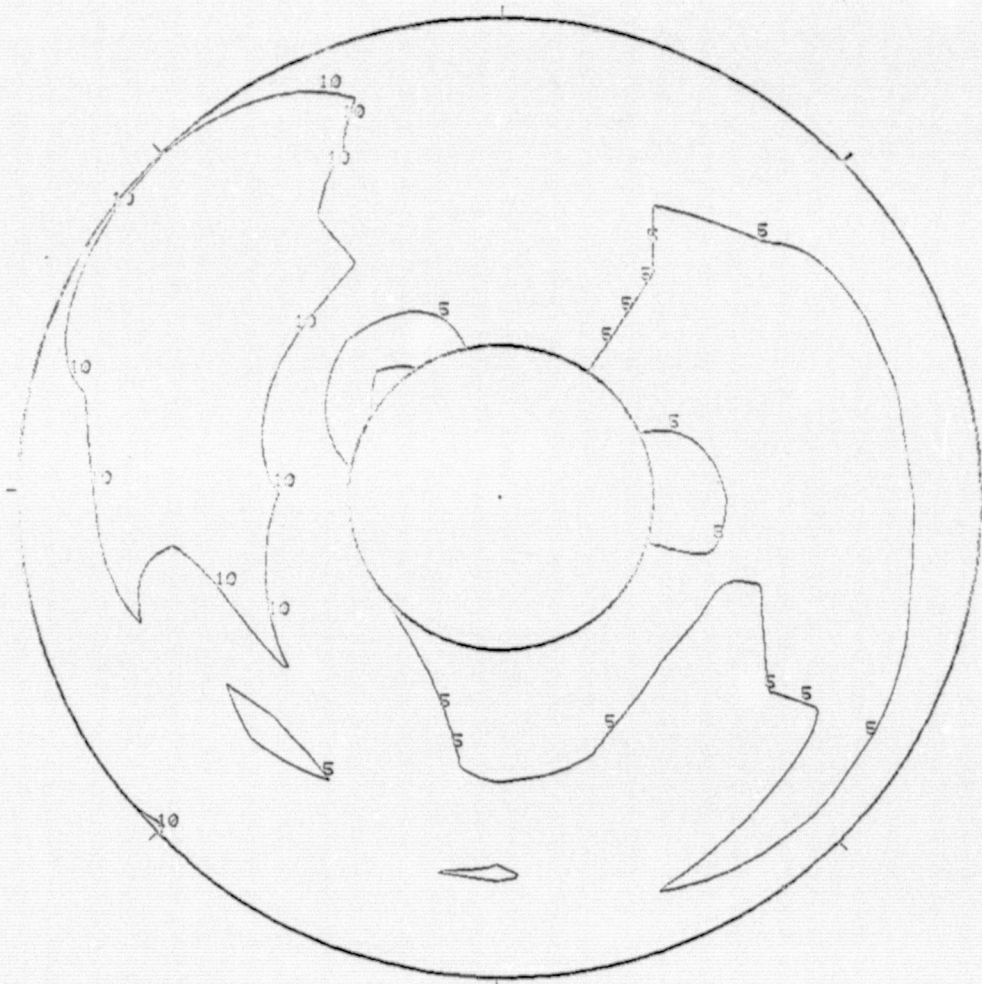
FIGURE G-77 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, WAT2 = 59.0 %

FSE - NASA DATA STUDY

DATA PART/POINT 548 / 3 IDENT. 77
THE SEGMENT START TIME WAS AT 0:10:29.001

MACH 2.2	ALPHA 11	BETA 0	THQ 0.9	DELTA3 14.8	WAT200 0.07742 (120.0)	WAT2 59.0%	CL/W -23.0
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77 (k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00720

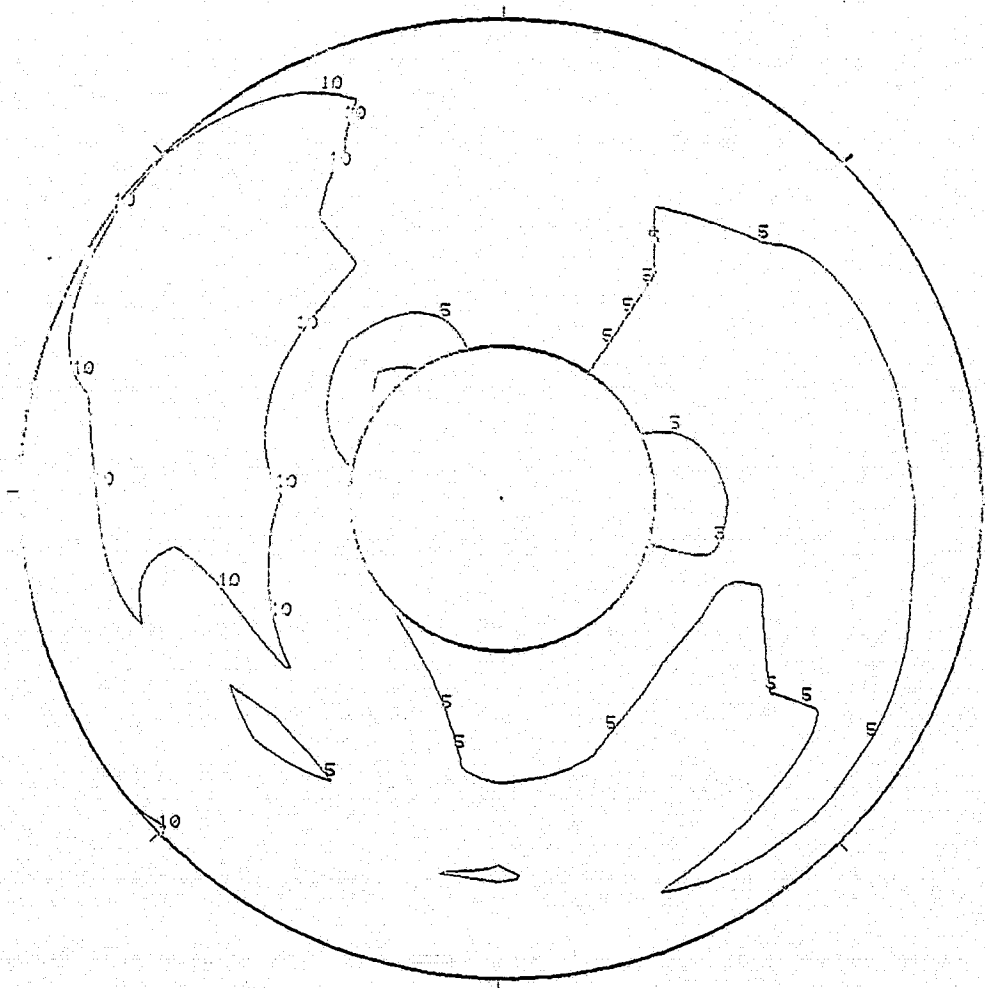
FIGURE G-77 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, WAT2 = 59.0 %

FSE - NASA DATA STUDY

DATA PART/POINT 648 / 3 IDENT. 77
THE SEGMENT START TIME WAS AT 0:10:29.001

MACH	ALPHA	BETA	WAT	DELTA	WAT2	WAT2	CIVV
2.2	11	0	51.3	14.3	0.07742 (120.0)	59.0%	-25.0

77 (k) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00720

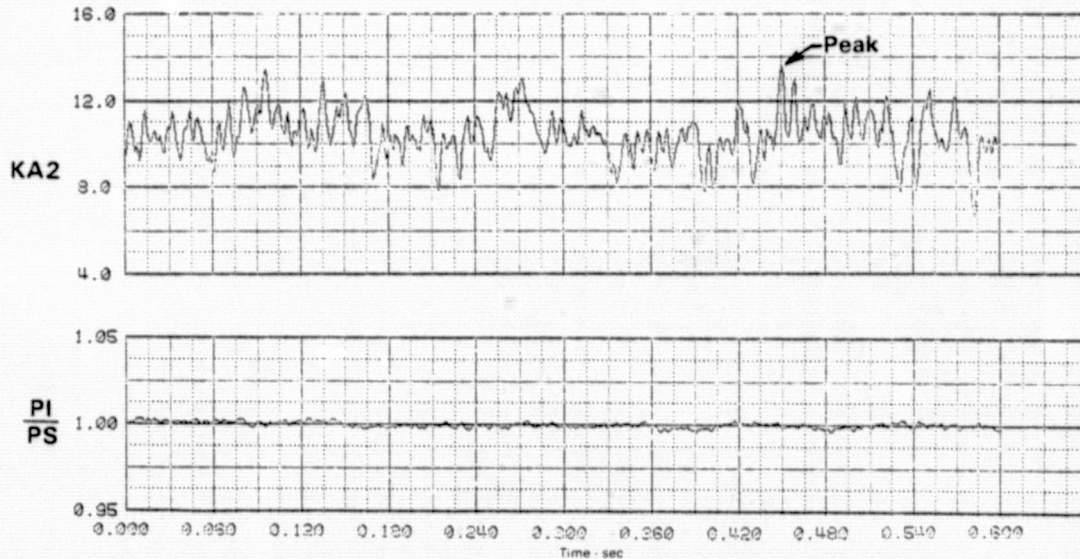
FIGURE G-77 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, WAT2 = 59.0 %

FSE - NASA DATA STUDY

DATA PART/POINT 548 / 3 IDENT. 77
THE SEGMENT START TIME WAS AT 0:19:28.001

MACH 2.2	ALPHA 11	BETA 0	RHO 6.8	DELTA3 24.8	BYPASS 0.07742 (120.0)	WAT2 59.0%	CIVV -25.0
P1 56.65 (8.217)	PI/PS 0.998	KTHETA 0.264	KRA2 0.451	BKRA2 13.411	KA2 13.676	KC2 0.175	KOSP 0.153
							D2 0.073

77 (I) Time History Plots 170 Hz



PEAK AT TIME = 0.450112 SECONDS

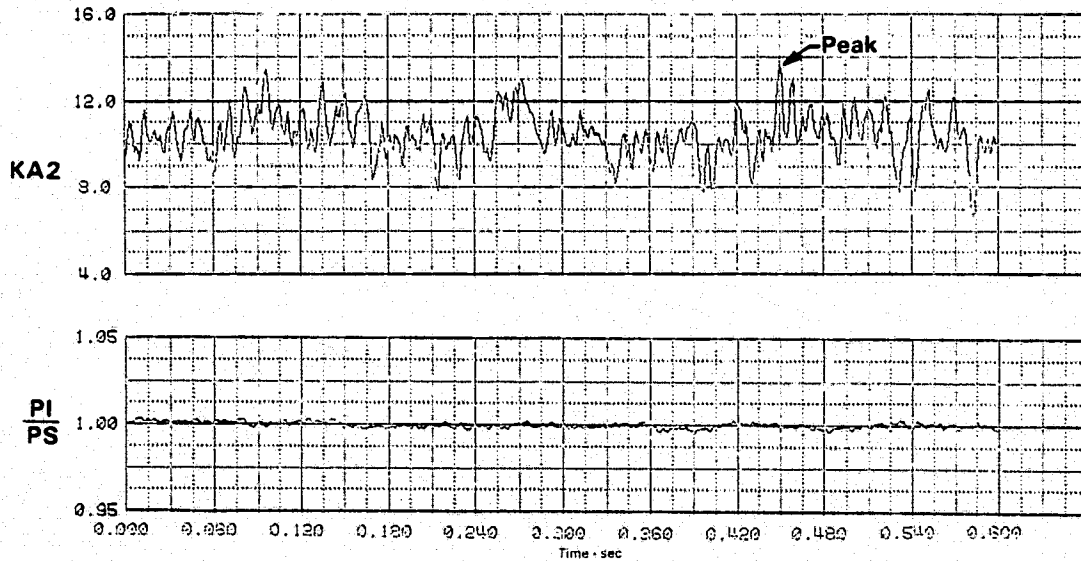
FIGURE G-77 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, WAT2 = 59.0 %

FSE - NASA DATA STUDY

DATA PART/POINT 548 / 3 IDENT. 77
THE SEGMENT START TIME WAS AT 0:19:28.001

MACH 2.2	ALPHA 11	BETA 0	RHO 6.8	DELTA3 24.8	BYPASS 0.07742 (120.0)	WAT2 59.0%	CIVV -25.0
P1 56.65 (8.217)	PI/PS 0.998	KTHETA 0.264	KRA2 0.451	BKRA2 13.411	KA2 13.676	KC2 0.175	KOSP 0.153
							D2 0.073

77 (I) Time History Plots 170 Hz



PEAK AT TIME = 0.450112 SECONDS

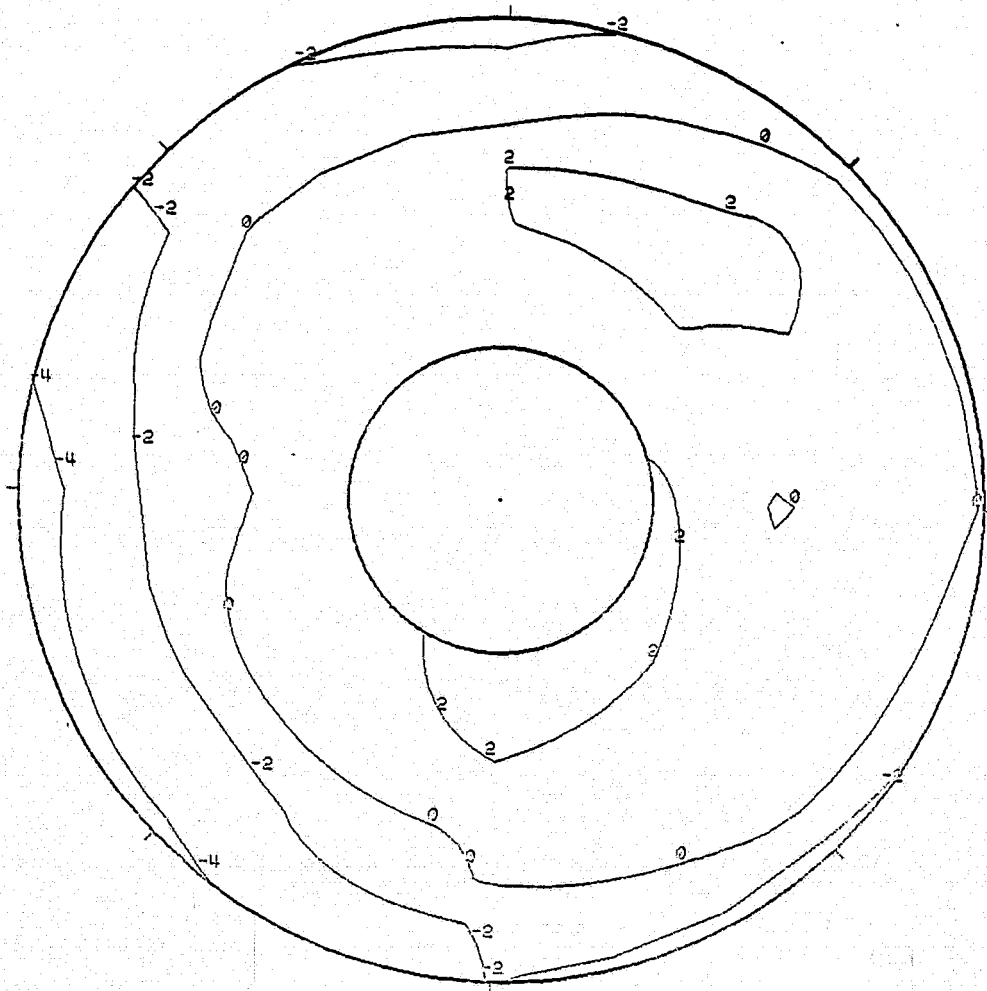
FIGURE G-77 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, WAT2 = 59.0 %

FSE - NASA DATA STUDY

DATA PART/POINT 548 / 3 IDENT. 77
THE SEGMENT START TIME WAS AT 0:19:28.091

MACH 2.2	ALPHA 11	BETA 0	RHO 6.8	DELTA3 24.8	BYPASS 0.07742 (120.0)	WAT2 59.0%	CIVV -25.0
PI 56.65 (0.217)	PI/PS 0.998	KTHETA 0.264	KRA2 0.451	BKRA2 13.411	KA2 13.676	KC2 0.175	KOSP 0.153
							D2 0.073

77 (m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 56.65 kPa (8.217 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.450112 SECONDS

FIGURE G-77 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, WAT2 = 59.0 %

FSE - NASA Data Study
 Part/Point - 549/8, Ident 78
 RHO DELTA3 BYPASS CIVV
 6.8 24.8 0.068(105.0) -25.00

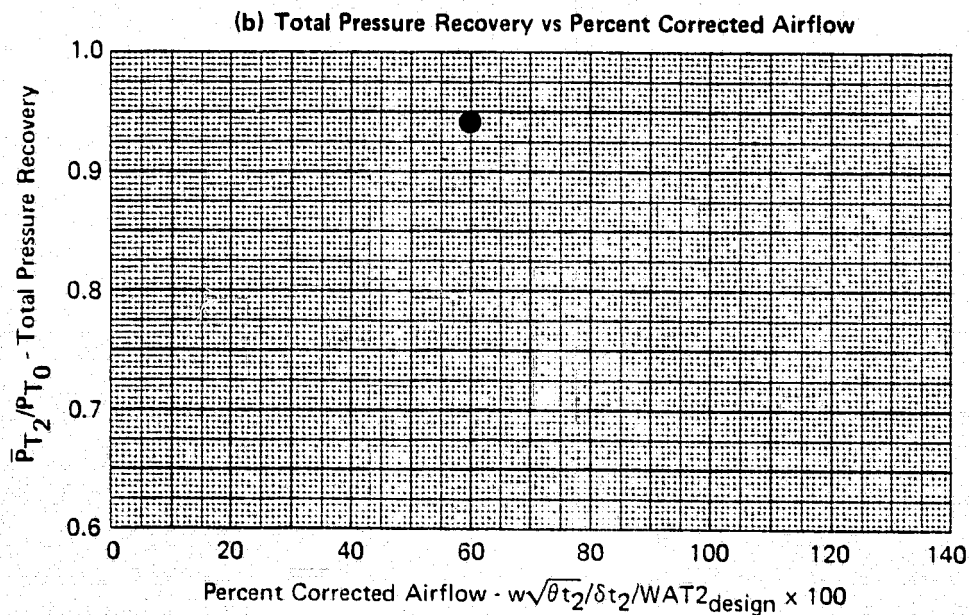
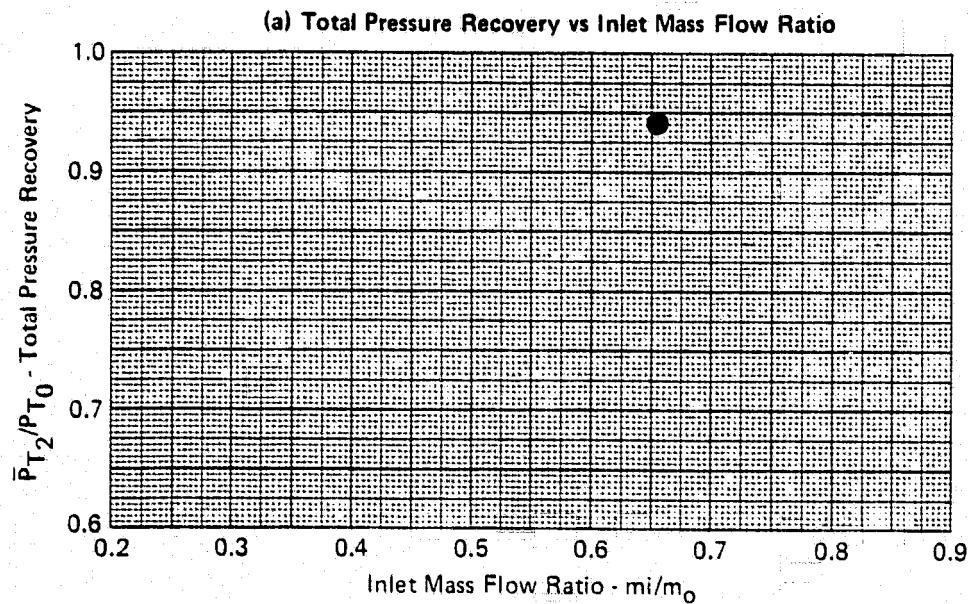
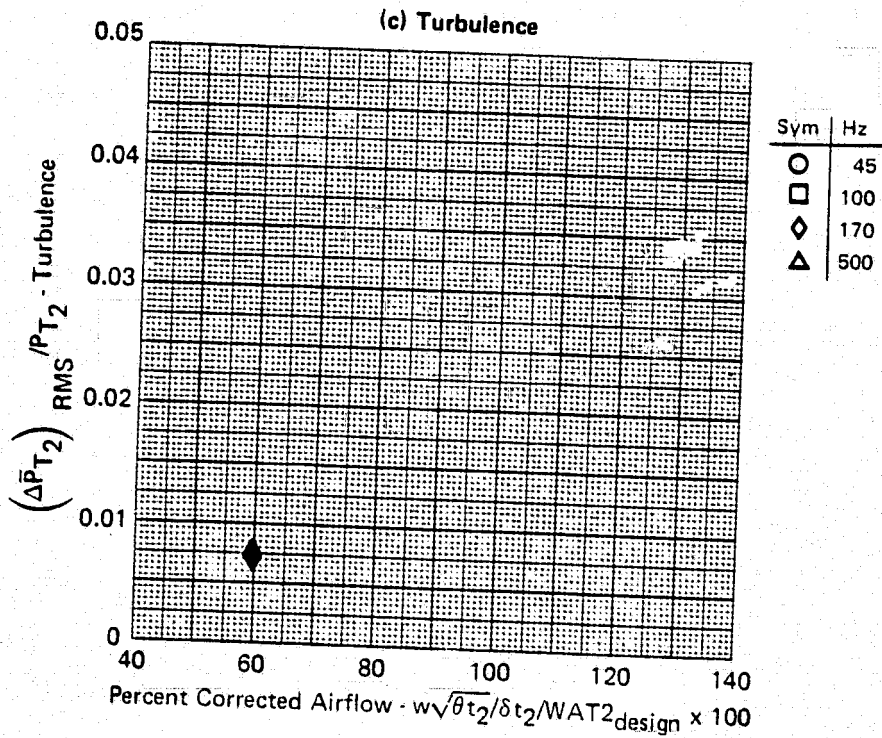


FIGURE G-78
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2, \alpha = 11.0, \beta = 0.0, WAT2 = 59.8 \%$

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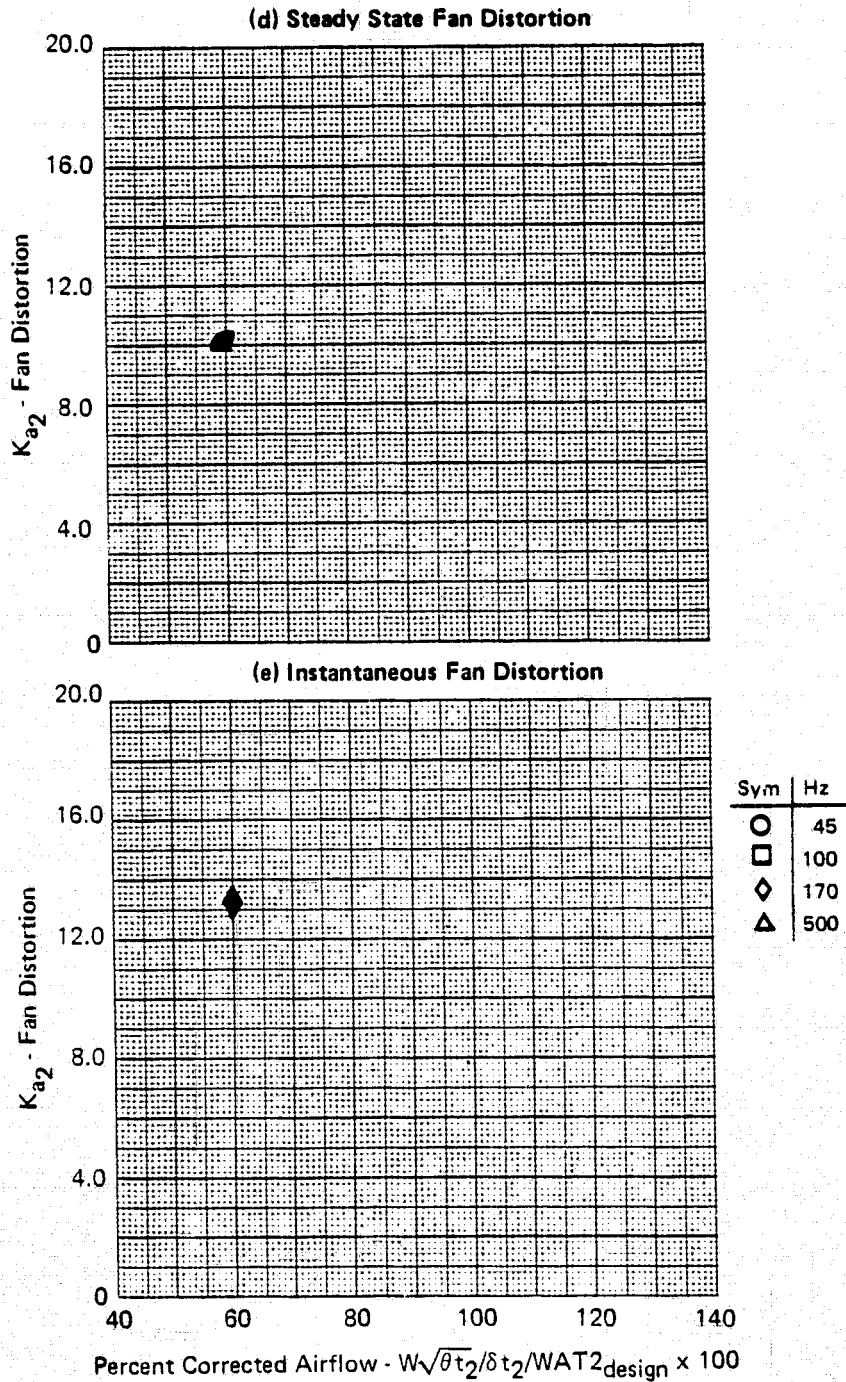
FSE - NASA Data Study
 Part/Point - 549/8, Ident 78
 RHO DELTA3 BYPASS CIVV
 6.8 24.8 0.068(105.0) -25.00



GP77-0658-5

FIGURE G-78 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, $WAT2 = 59.8\%$

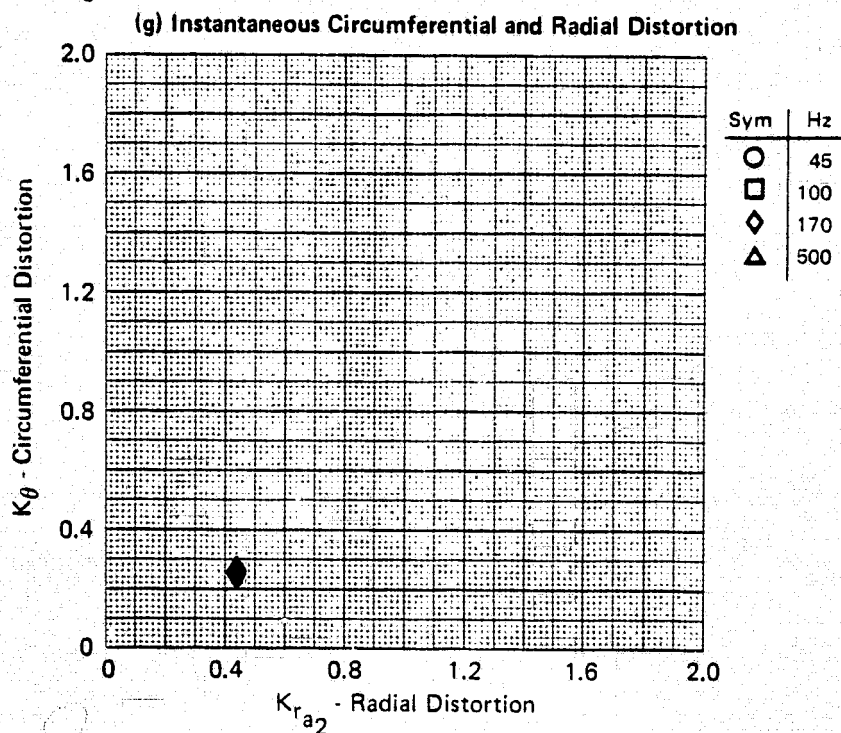
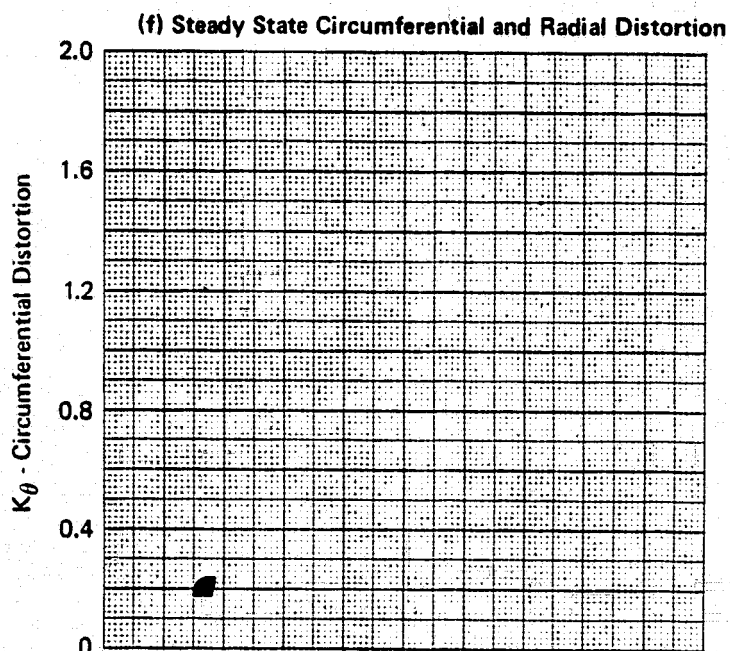
FSE - NASA Data Study
 Part/Point - 549/8, Ident 78
 RHO DELTA3 BYPASS CIVV
 6.8 24.8 0.068(105.0) -25.00



GP77-0658-3

FIGURE G-78 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, $WAT2 = 59.8\%$

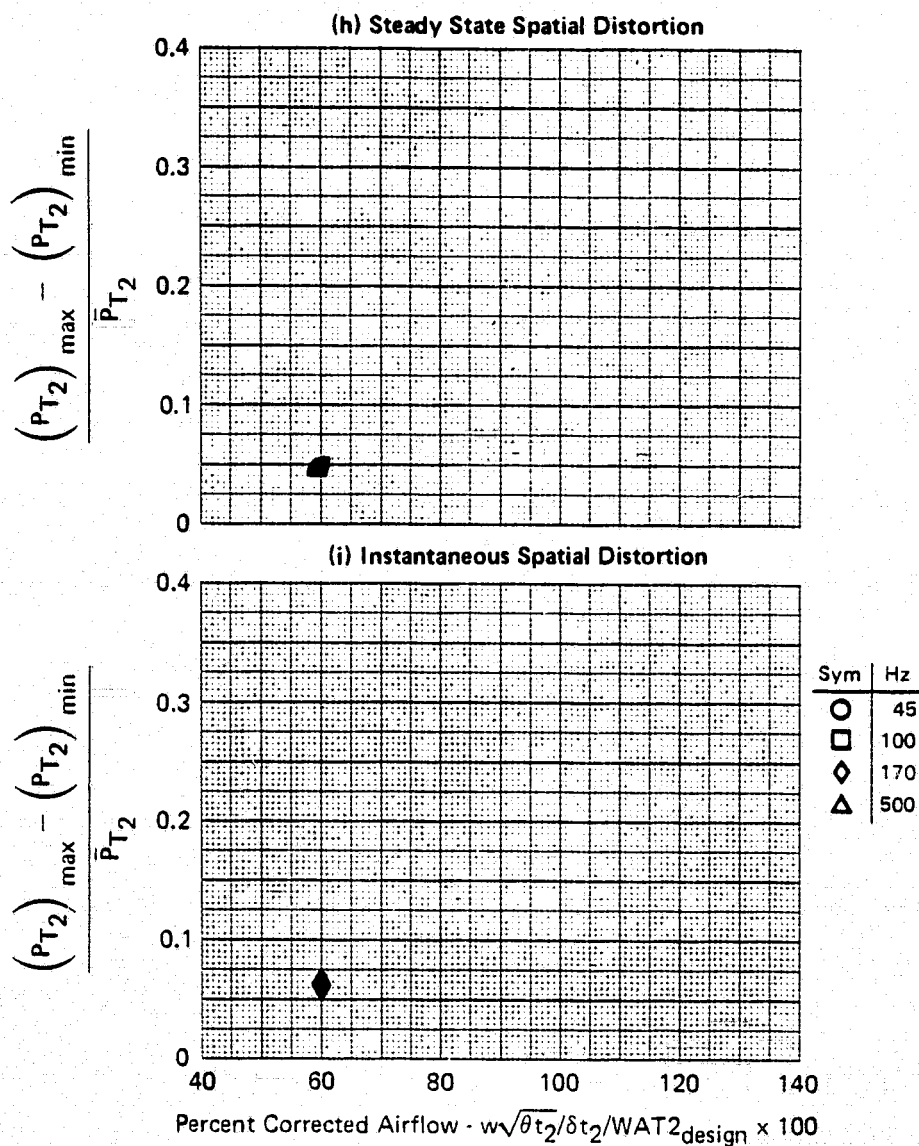
FSE - NASA Data Study
 Part/Point - 549/8, Ident 78
 RHO DELTA3 BYPASS CIVV
 6.8 24.8 0.068(105.0) -25.00



GP77-0658-2

FIGURE G-78 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, $WAT2 = 59.8\%$

FSE - NASA Data Study
 Part/Point - 549/8, Ident 78
 RHO DELTA3 BYPASS CIVV
 6.8 24.8 0.068(105.0) -25.00



GP77-0658-4

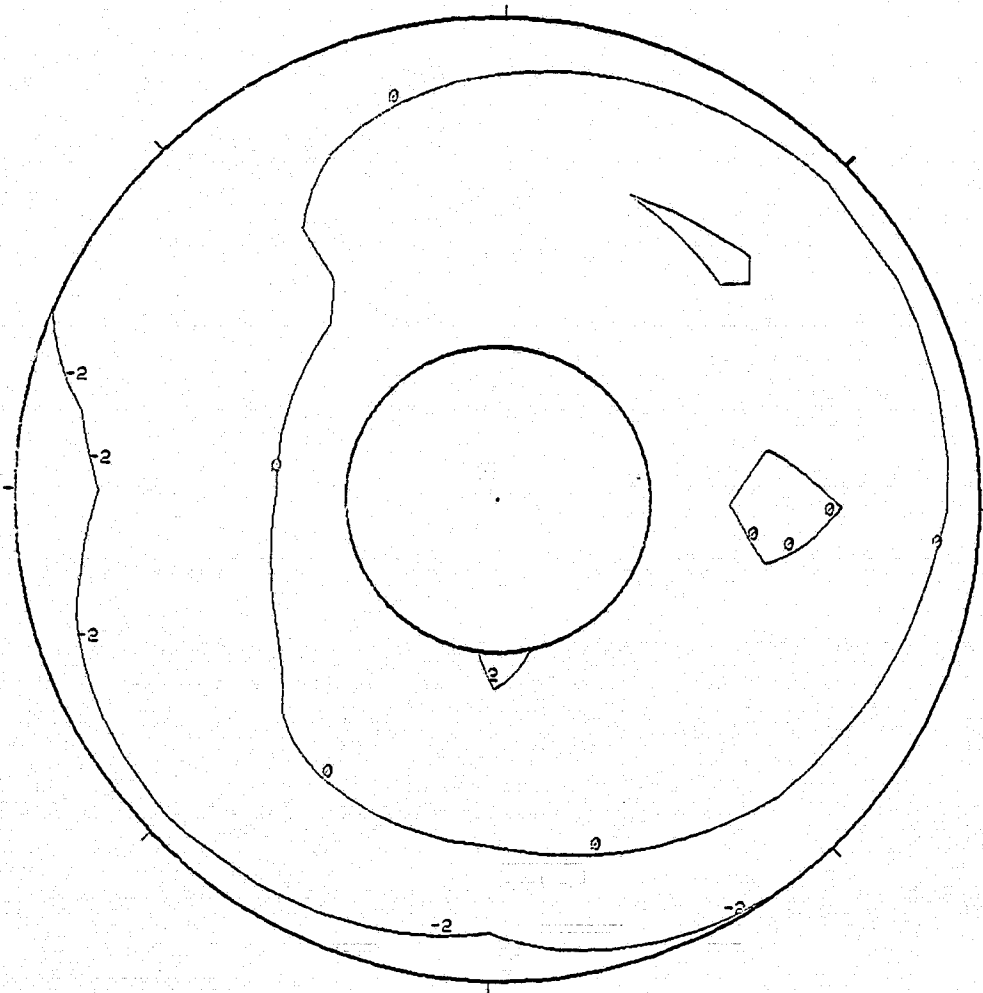
FIGURE G-78 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, $WAT2 = 59.8\%$

FSE - NASA DATA STUDY

DATA PART/POINT 549 / 3 IDENT. 78
THE SEGMENT START TIME WAS AT 1: 5:42.090

MACH 2.2	ALPHA 11	BETA 0	RHO 6.2	DELTA3 24.8	BYPASS 0.06774 (106.0)	WAT2 59.6%	CIVV -25.0
P1 56.64 (8.215)	P1/PS 1.020	KTHETA 0.200	KRA2 0.936	EKRA2 9.926	KA2 10.036	KC2 0.134	KESP 0.153
							D2 0.046

78 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 56.64 kPa (8.215 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

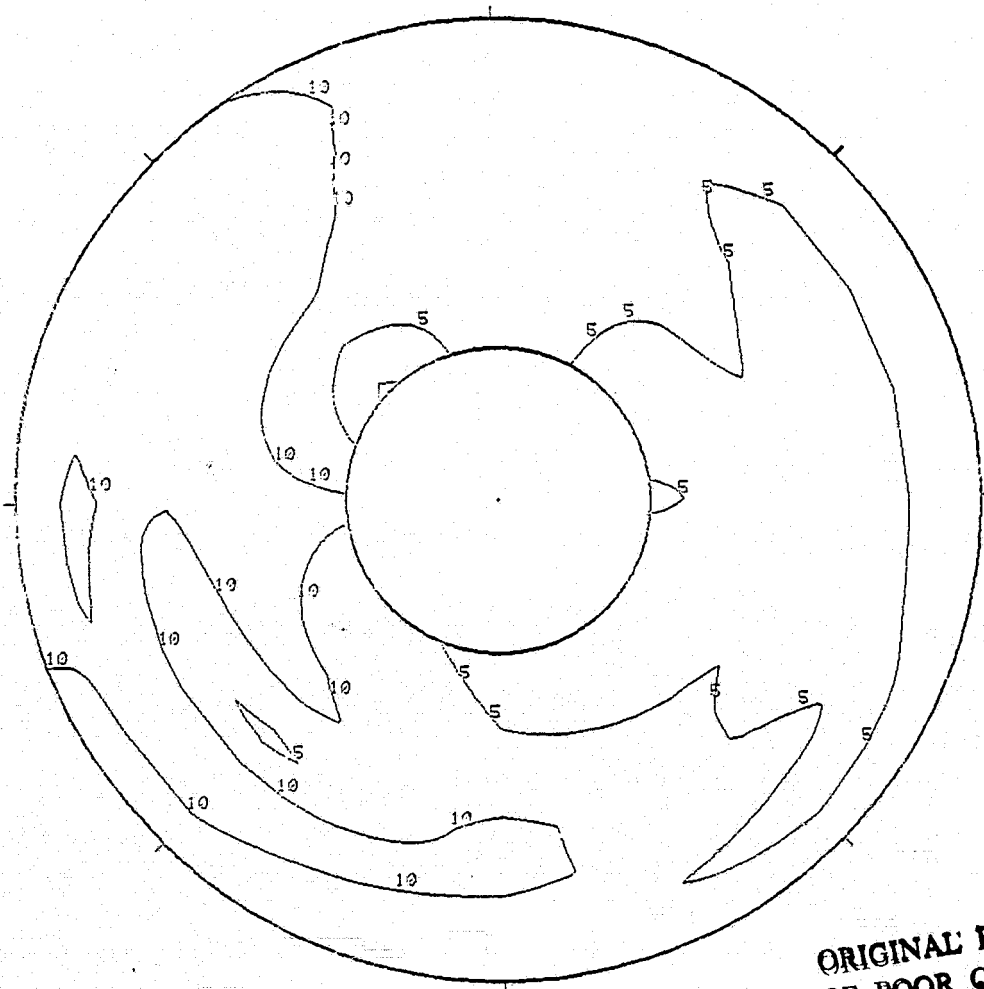
FIGURE G-78 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, WAT2 = 59.8 %

FSE - NASA DATA STUDY

DATA PART/POINT 483 / 3 IDENT. 78
THE SEGMENT START TIME WAS AT 1: 54:28.000

MOCH	ALPHA	BETA	WAT	DELTA	WAT2	NOTE	CIVV
2.1	11	5	9.3	10.3	0.06774 (105.0)	59.8%	-25.0

78(k) Turbulence Contour 170 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .00744

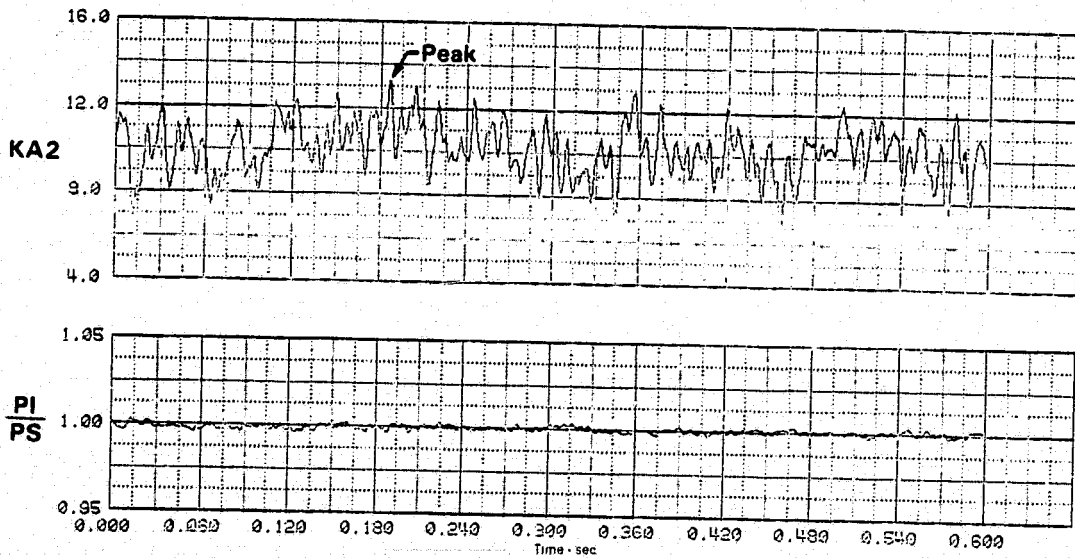
FIGURE G-78 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, WAT2 = 59.8 %

FSE - NASA DATA STUDY

DATA PART/POINT 549 / 8 IDENT. 78
THE SEGMENT START TIME WAS AT 1: 5:42.030

MACH 2.2	ALPHA 11	BETA 9	RHO 8.8	DELTA3 24.8	WAT2 0.06774 (105.0)	WAT2 59.8%	CIVV -25.0
P1 56.52 (8.198)	PI/PS 0.933	KAPPA 0.255	KR2 0.442	FR2 13.913	KP2 13.272	KQ2 0.133	Q2 0.137
							D2 0.663

78 (I) Time History Plots 170 Hz



PEAK AT TIME = 0.186104 SECONDS

FIGURE G-78 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, $WAT2 = 59.8\%$

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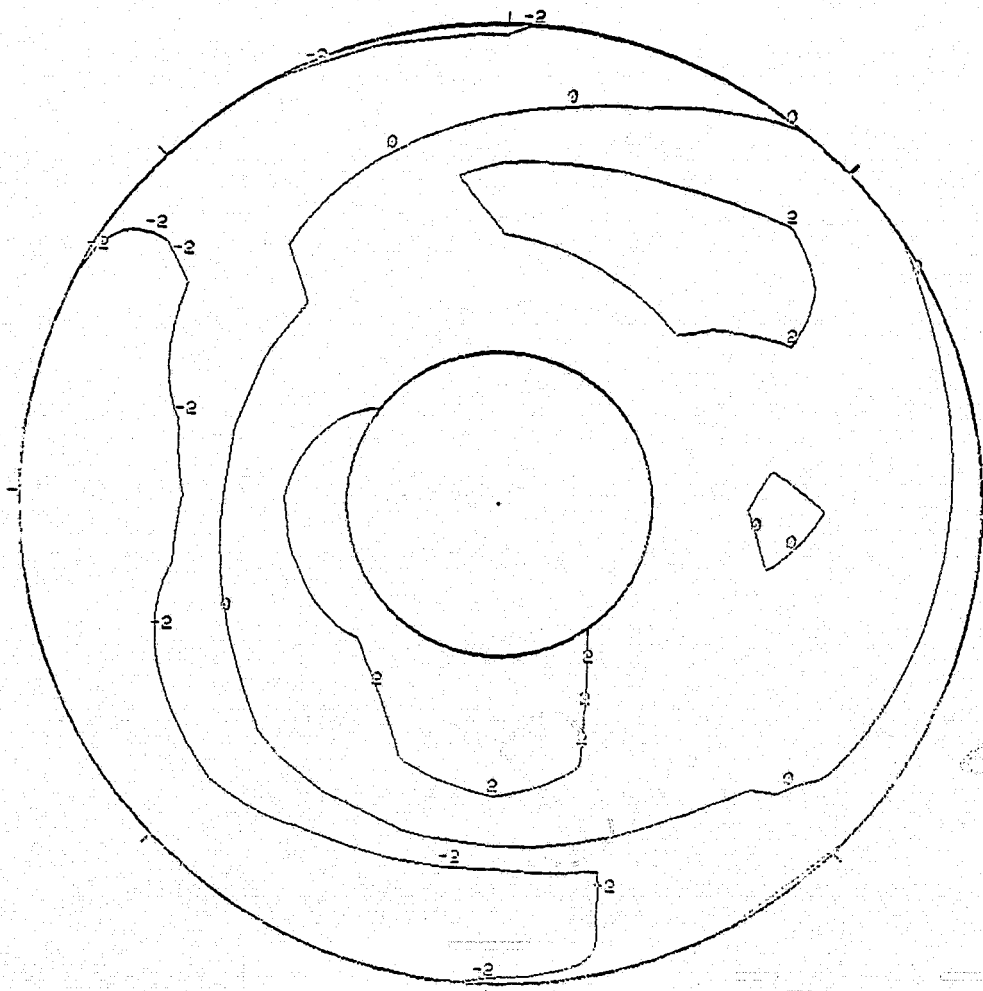
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FSE - NASA DATA STUDY

DATA PART/POINT 549 / 8 IDENT. 78
THE SEGMENT START TIME WAS AT 1: 5:42.030

MACH 2.2	ALPHA 11	BETA 3	RHO 6.9	DELTA3 24.3	BYPASS 0.06774 (105.0)	WAT2 59.8%	C1V -25.1
PI 56.52 (8.198)	PI/PS 0.933	KTHETA 0.259	KRQ2 0.442	EKRA2 13.313	KA2 13.272	KC2 0.136	KOSP 0.157
							D2 0.063

78(m) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



MEAN FACE PRESSURE = 56.52 kPa (8.198 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.186104 SECONDS

FIGURE G-78 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.2$, $\alpha = 11.0$, $\beta = 0.0$, WAT2 = 59.8 %

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SERIES VIII - NASA Data Study
 Part/Point - 227/7, Ident 79
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.077(120.0) -25.00

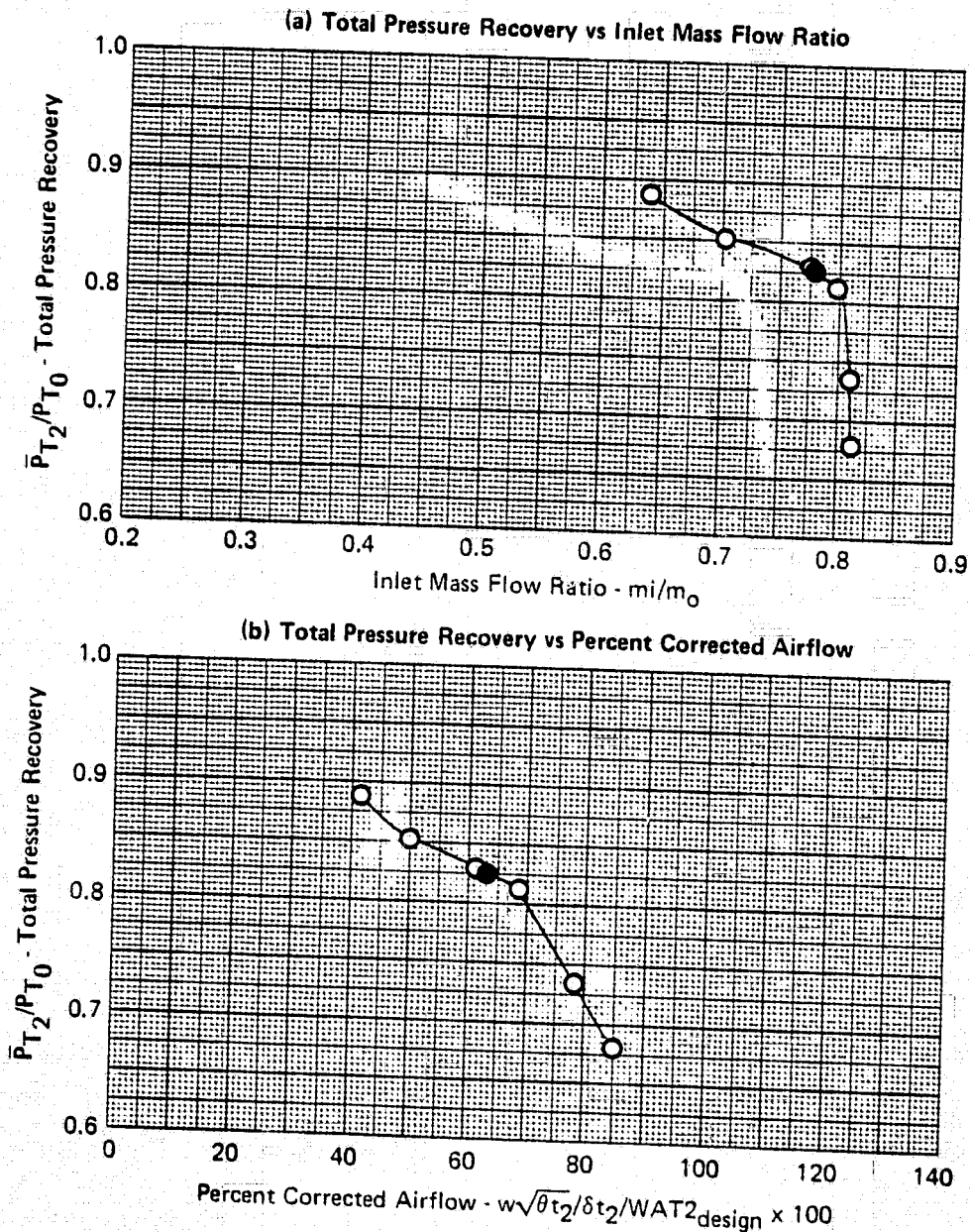
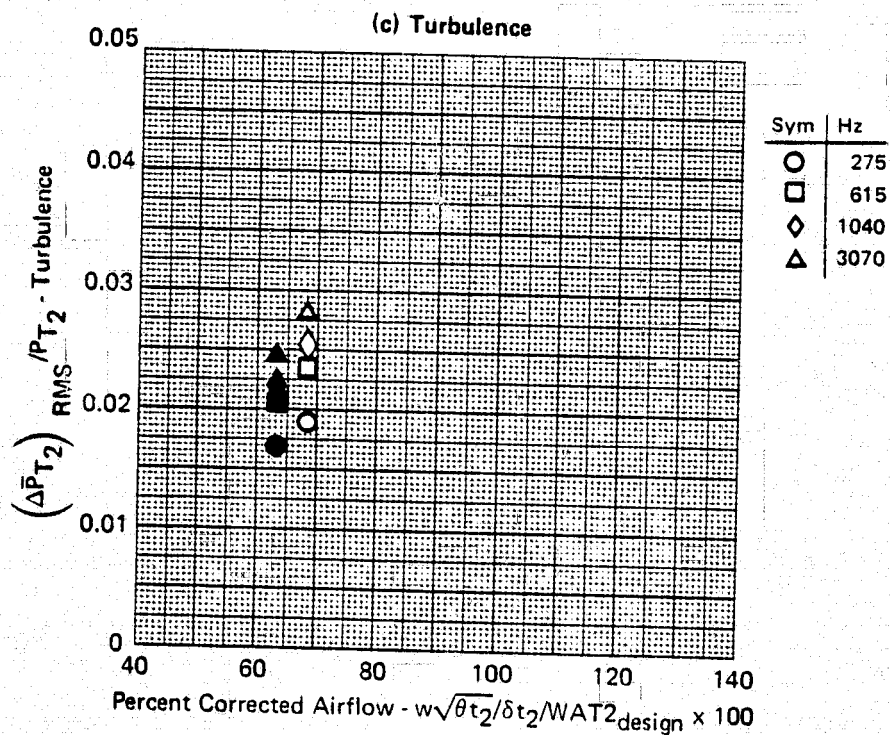


FIGURE G-79
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 63.1\%$

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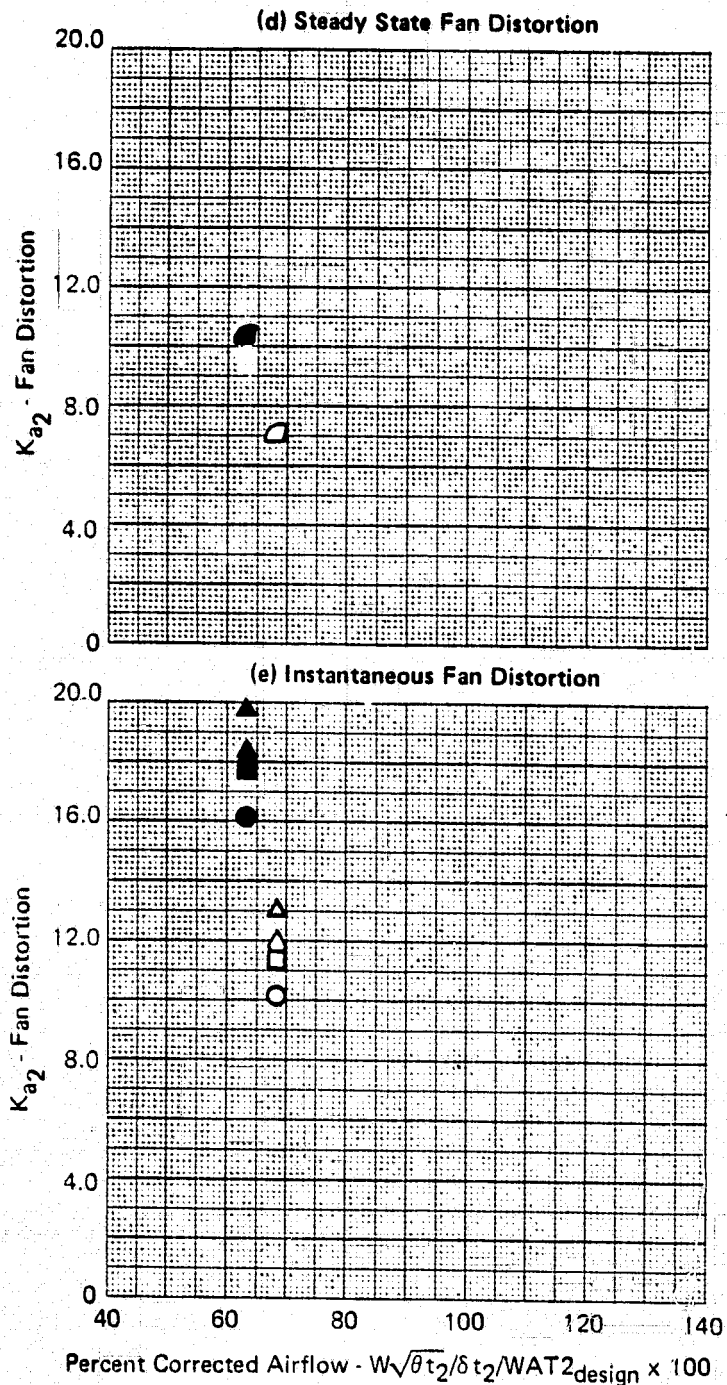
SERIES VIII - NASA Data Study
 Part/Point - 227/7, Ident 79
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.077(120.0) -25.00



GP77-0658-5

FIGURE G-79 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 63.1\%$

SERIES VIII - NASA Data Study
 Part/Point - 227/7, Ident 79
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.077(120.0) -25.00



GP77-0658-3

FIGURE G-79 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 63.1\%$

SERIES VIII - NASA Data Study
 Part/Point - 227/7, Ident 79
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.077(120.0) -25.00

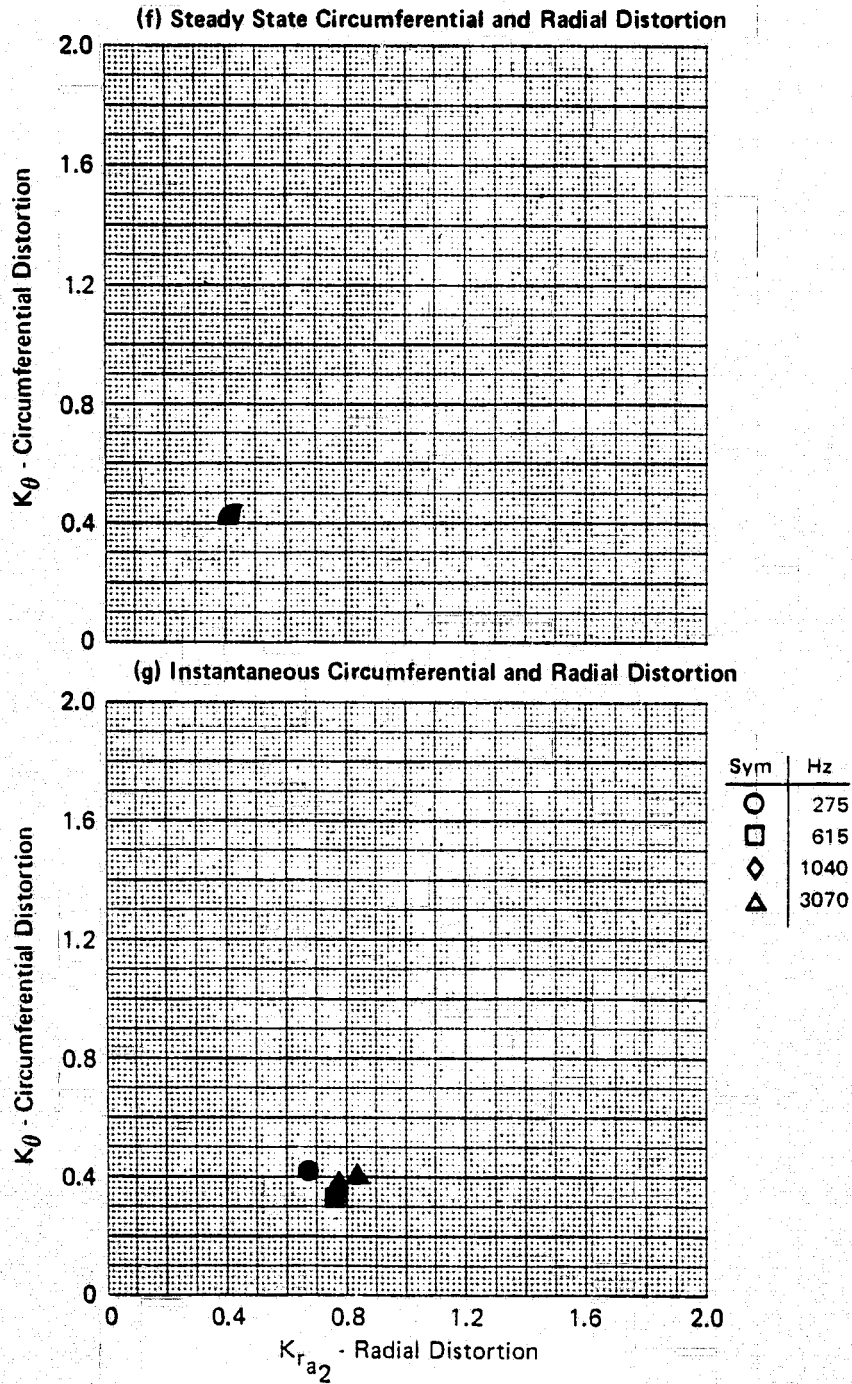
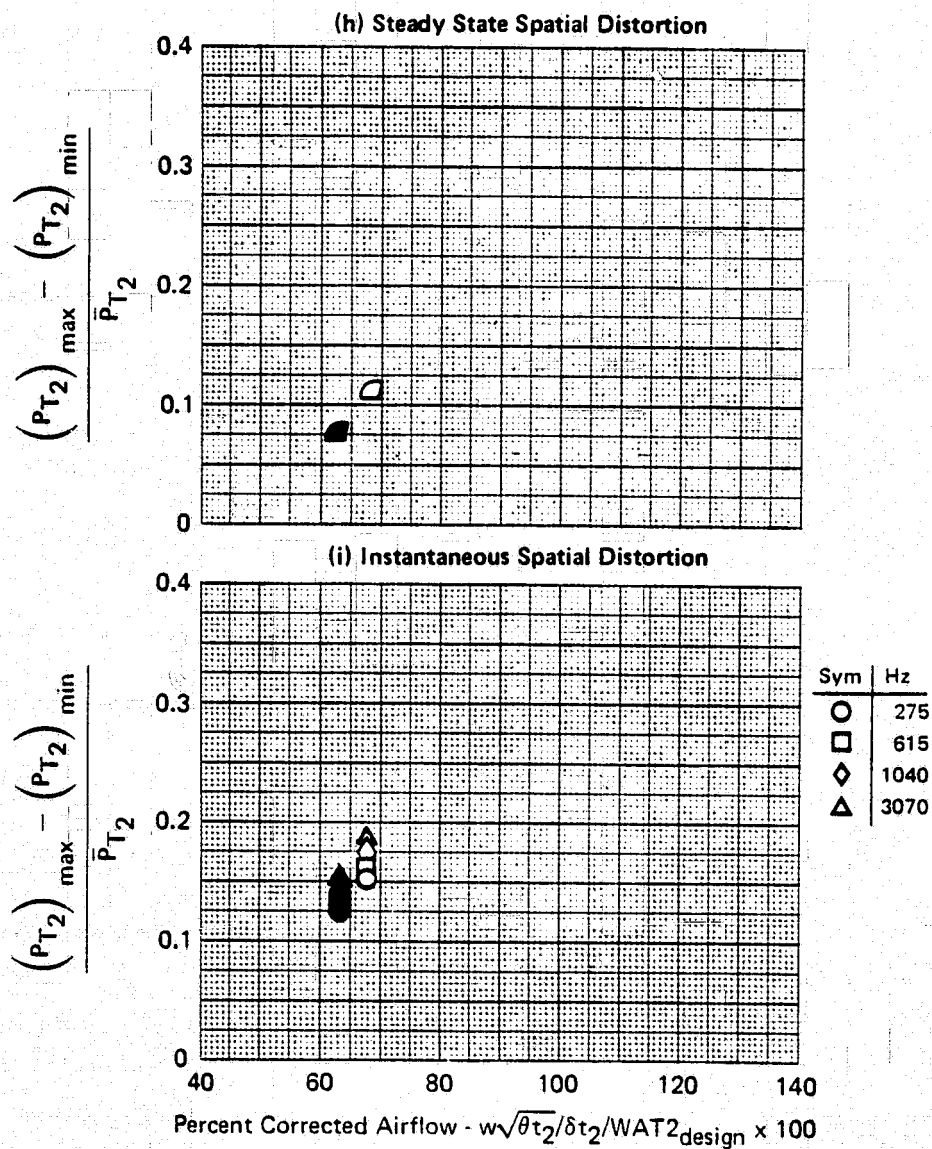


FIGURE G-79 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1 %

SERIES VIII - NASA Data Study
 Part/Point - 227/7, Ident 79
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.077(120.0) -25.00



GP77-0658-4

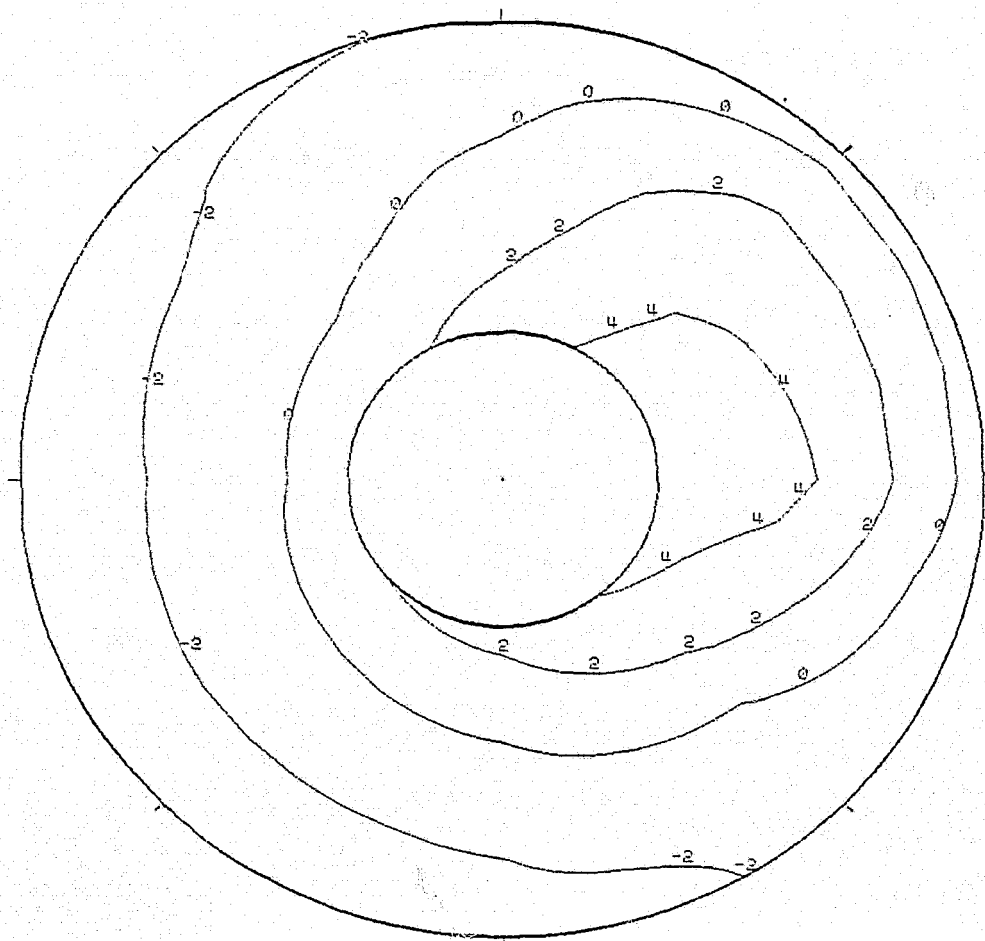
FIGURE G-79 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 63.1\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 7 IDENT. **79**
 THE SEGMENT START TIME WAS AT 20:27:47.045

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 28.0	BYPASS 0.07742 (120.0)	WAT2 63.1%	CIVV -25.0
PI 41.84 (6.069)	PI/PS 1.000	KTHETA 0.421	KRA2 0.422	BKRA2 9.384	KR2 10.235	KO2 0.375	KASP 0.452
							D2 0.076

79 (j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 41.84 kPa (6.069 PSIA)
 NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
 FROM MEAN FACE PRESSURE.

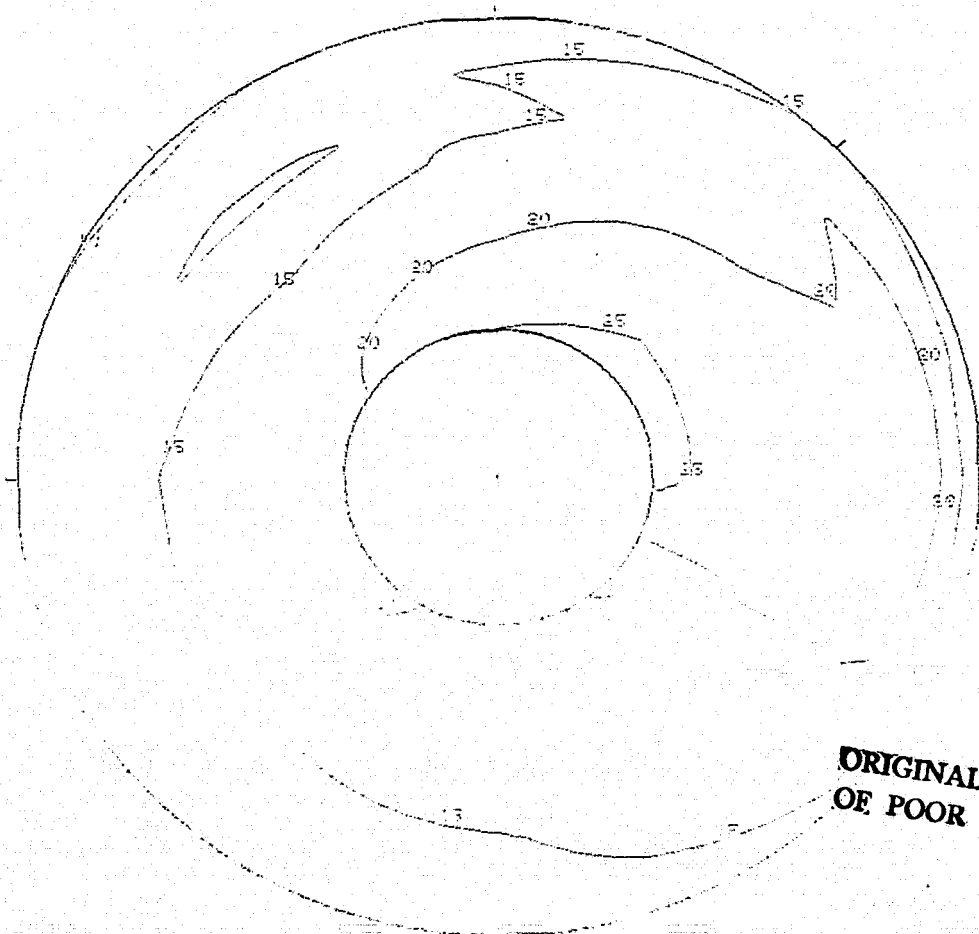
FIGURE G-79 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 7 IDENT. 79
THE SEGMENT START TIME WAS AT 20:29:4.045

MACH 2.5	ALPHA 0	BETA 0	PHI -1.0	DELTA3 25.0	HYPO3 0.07742 (120.0)	WAT2 63.1%	CLV -25.0
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79(k) Turbulence Contour 275 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01702

FIGURE G-79 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 63.1\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 7 IDENT. 79
THE SEGMENT START TIME WAS AT 20:27:47.045

MACH
2.5

ALPHA
0

BETA
0

PHI
-4.0

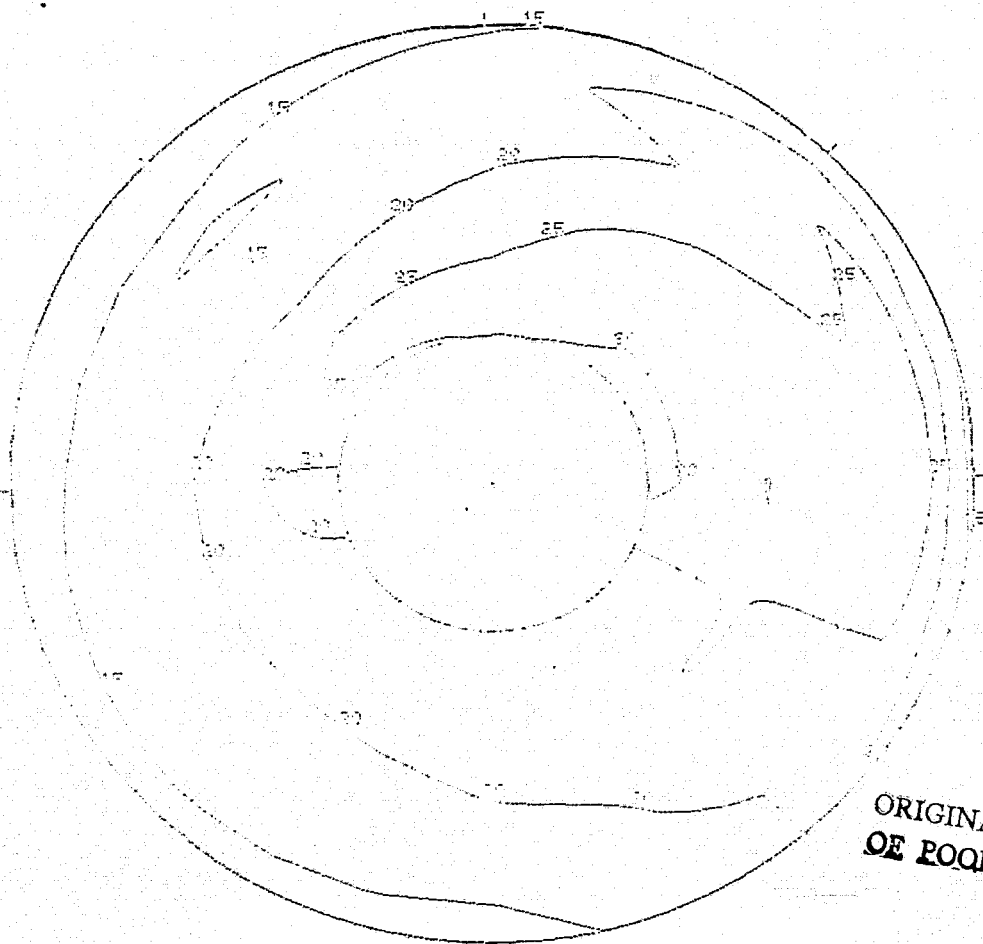
DELTA3
25.0

BYPASS
0.07742 (120.0)

WAT2
63.1%

CIVV
-25.0

79(I) Turbulence Contour
615 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02061

FIGURE G-79 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1 %

INLET DISTORTION ANALYSIS

79

NO. 1

NO. 2

NO. 3

NO. 4

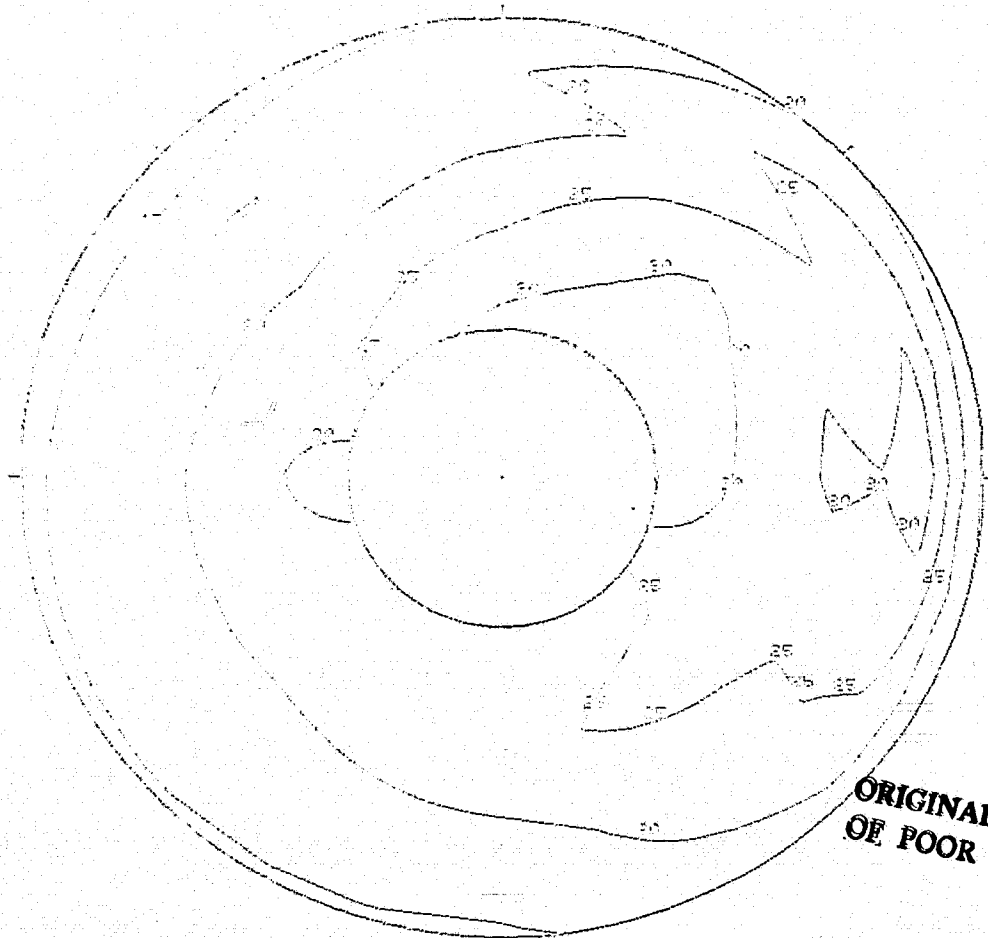
NO. 5

0.07742 (120.0)

63.1%

NO. 6

79(m) Turbulence Contour 1040 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02203

FIGURE G-79 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

$M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 7 IDENT. 79
THE SEGMENT START TIME WAS AT 20:27:47.045

MACH
2.5

ALPHA
0

BETA
0

RHO
-4.0

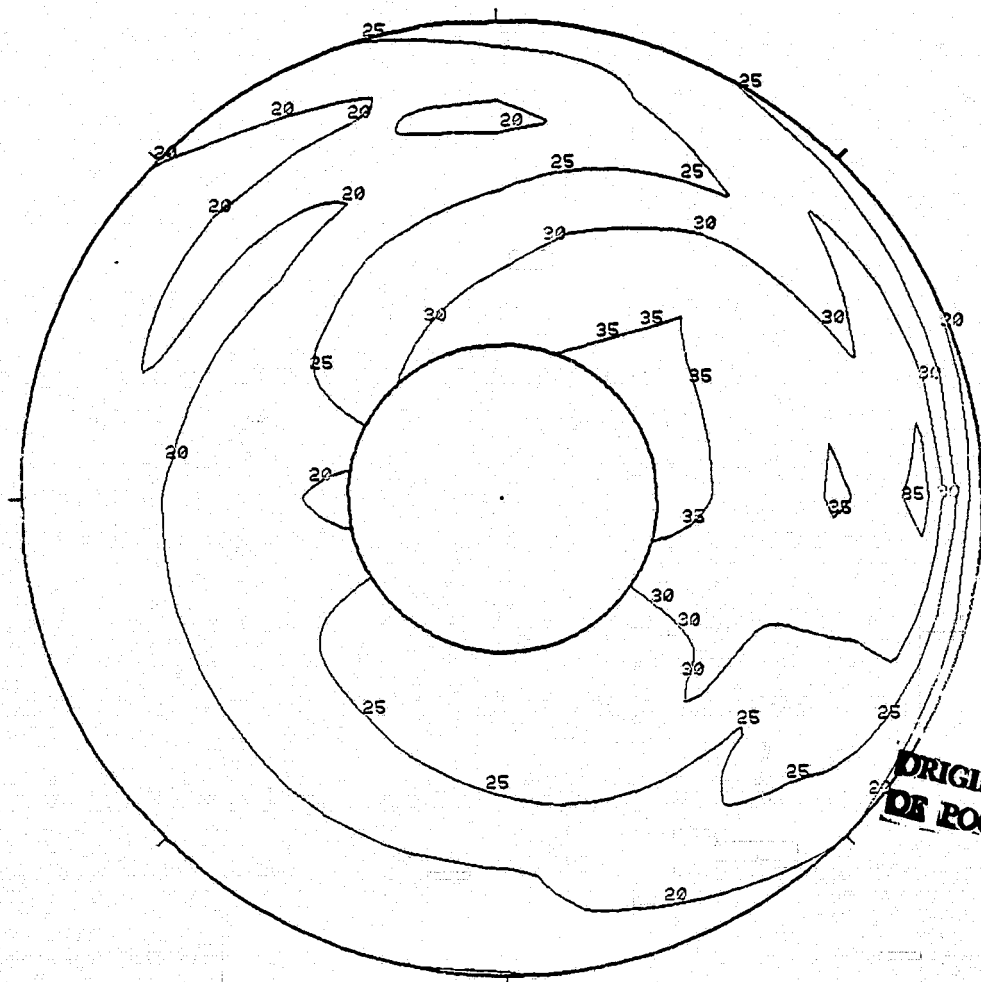
DELTA3
35.0

BYPASS
0.07742 (120.0)

WAT2
63.1%

CIVV
-25.0

79(n) Turbulence Contour 3070 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02464

FIGURE G-79 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

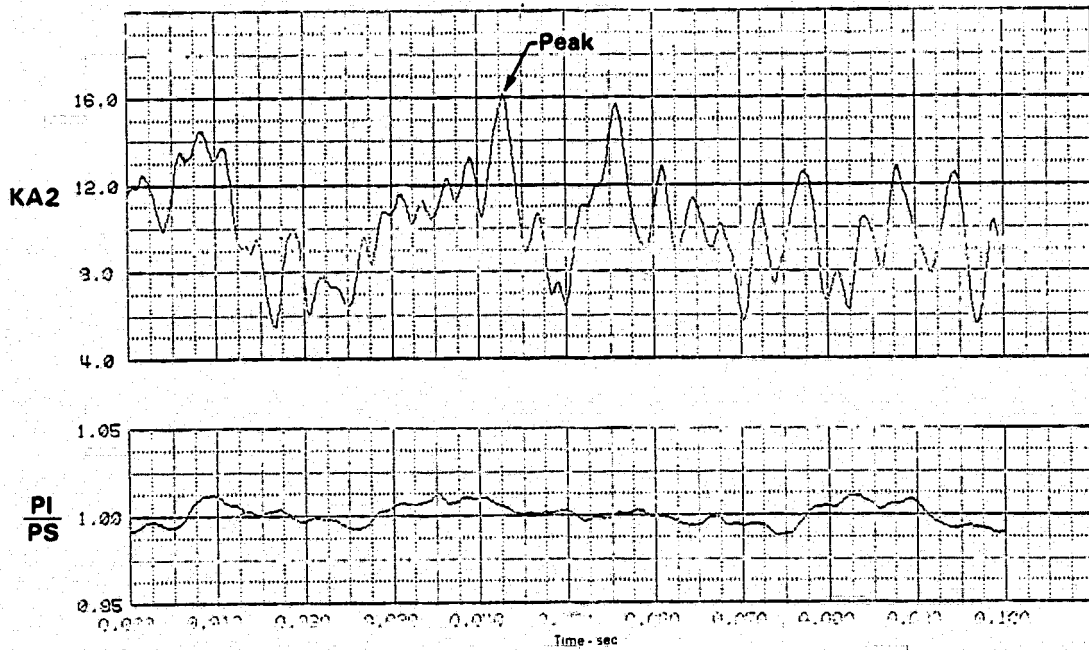
$M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 7 IDENT. 79
THE SEGMENT START TIME WAS AT 20:27:47.045

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 63.1%	CIVV -25.0
P1 42.04 (6.098)	PI/PS 1.000	KTHETA 0.022	KRA2 0.873	BKRA2 15.730	KA2 16.152	K02 0.502	KA02 0.474
							D2 0.129

79(o) Time History Plots
275 Hz



PEAK AT TIME = 0.042900 SECONDS

FIGURE G-79 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1 %

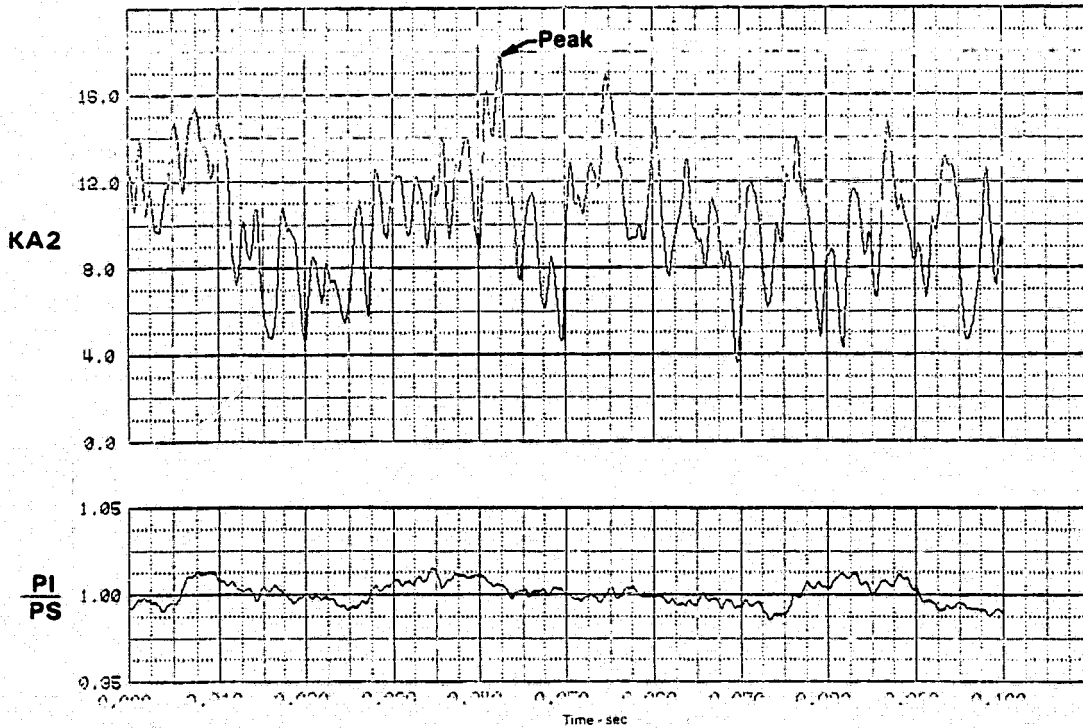
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 7 IDENT. 79
THE SEGMENT START TIME WAS AT 20:27:47.045

MACH 2.5	ALPHA 0	BETA 0	PHI -4.0	DELTA3 25.0	WAT2 0.07742 (120.0)	WAT2 63.1%	QIVV -25.0
P1 42.08 (6.103)	PI/PS 1.000	KTHETA 0.004	KPA2 0.046	BP/PA3 17.445	KP2 17.774	KP3 9.249	Q2 0.129

79(p)Time History Plots 615 Hz



PEAK AT TIME = 0.042405 SECONDS

FIGURE G-79 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1 %

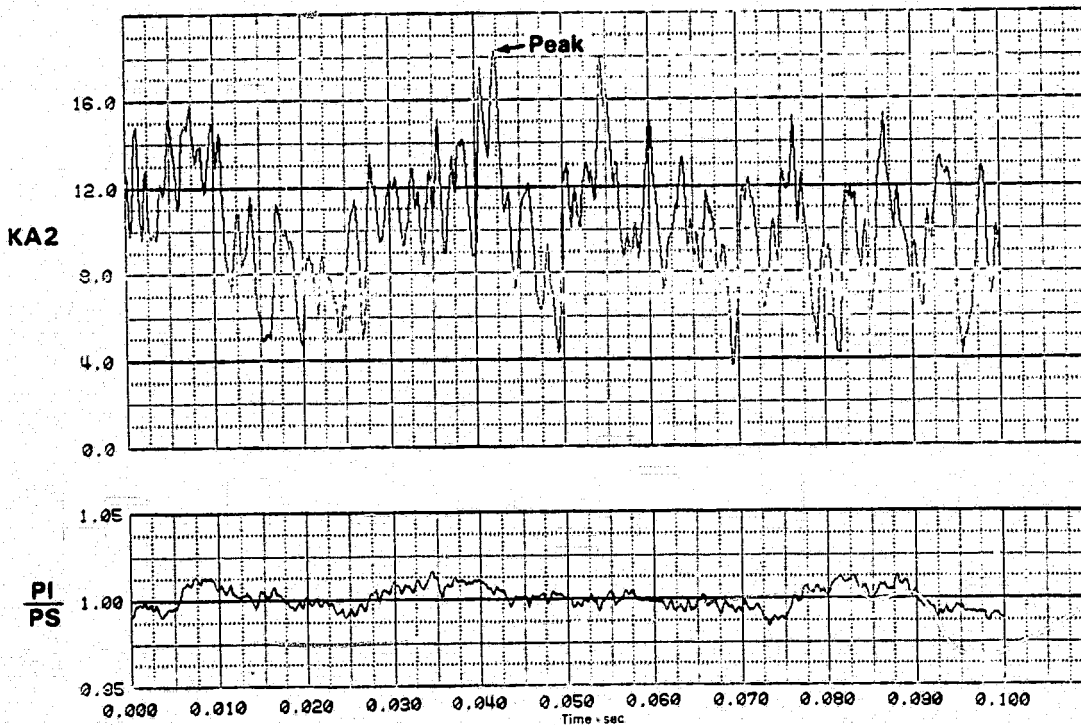
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 7 IDENT. 79
THE SEGMENT START TIME WAS AT 20:27:47.045

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	SWR333 0.07742 (120.0)	WAT2 63.1%	CIVV -25.0
P1 42.06 (6.100)	PI/PS 1.045	KTHETA 0.532	KPAR 0.753	PKPAR 17.545	KAS 13.213	KOS 0.334	KOSP 0.472
							D2 0.133

79(q) Time History Plots 1040 Hz



PEAK AT TIME = 0.042240 SECONDS

FIGURE G-79 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1%

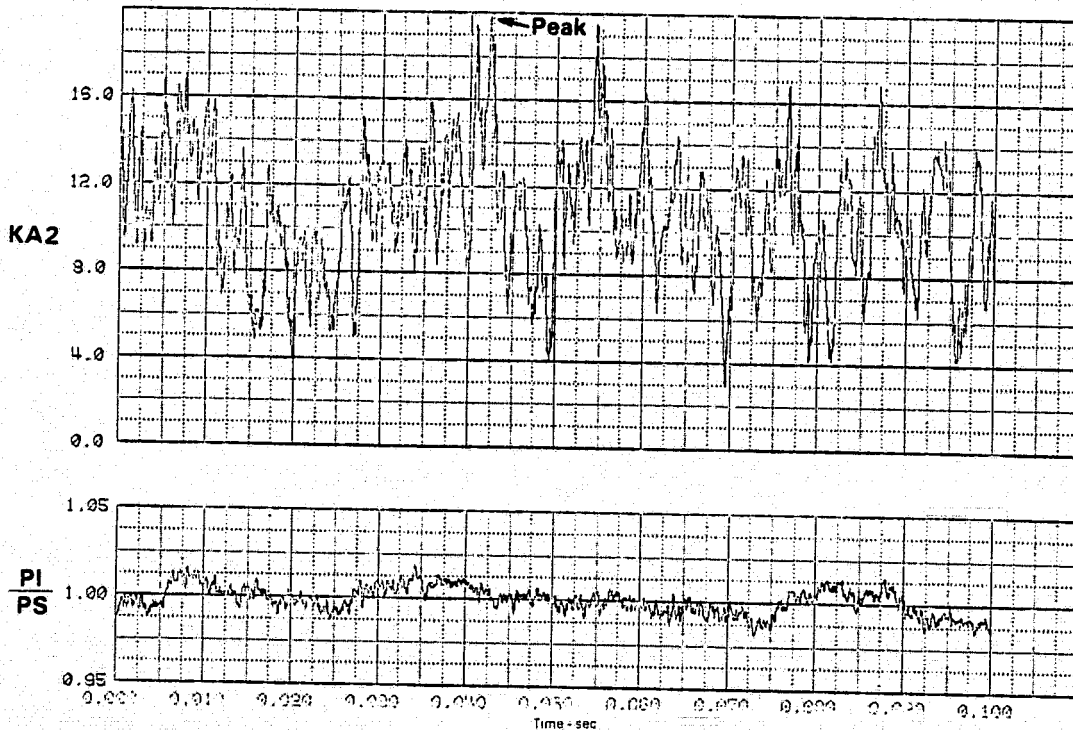
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 7 IDENT. 79
THE SEGMENT START TIME WAS AT 20:27:47.045

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 63.1%	CIVV -25.0
PI 42.00 (6.091)	PI/PS 1.004	KTHETA 0.405	KRA2 0.830	BKRA2 19.408	KA2 19.813	KC2 0.428	KOSP 0.471
							D2 0.152

79(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.042210 SECONDS

FIGURE G-79 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1 %

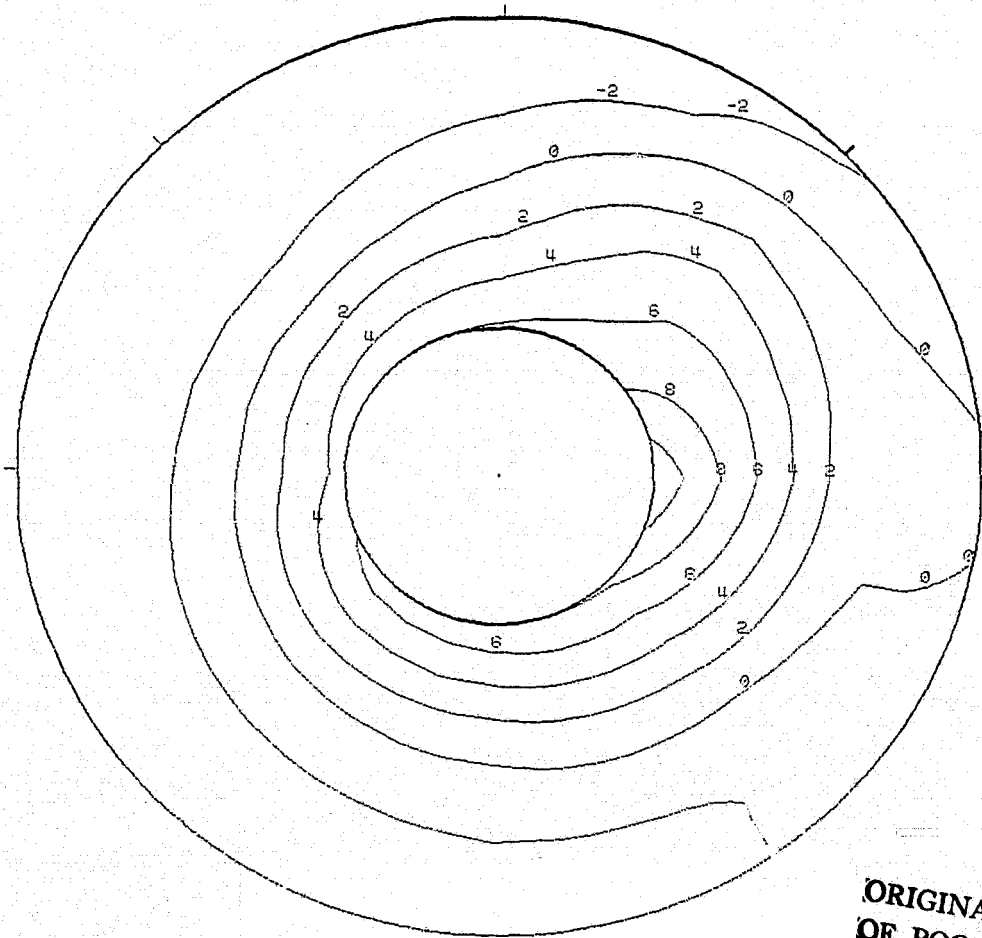
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 7 IDENT. 79
THE SEGMENT START TIME WAS AT 20:27:47.045

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 63.1%	CTVV -25.0
PI 42.04 (6.098)	P1/PS 1.095	KTHETA 0.432	KRA2 0.573	BKRA2 15.730	KR2 16.152	KC2 0.392	KOSP 0.474
							D2 0.129

**79(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
275 Hz**



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MEAN FACE PRESSURE = 42.04 kPa (6.098 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.042900 SECONDS

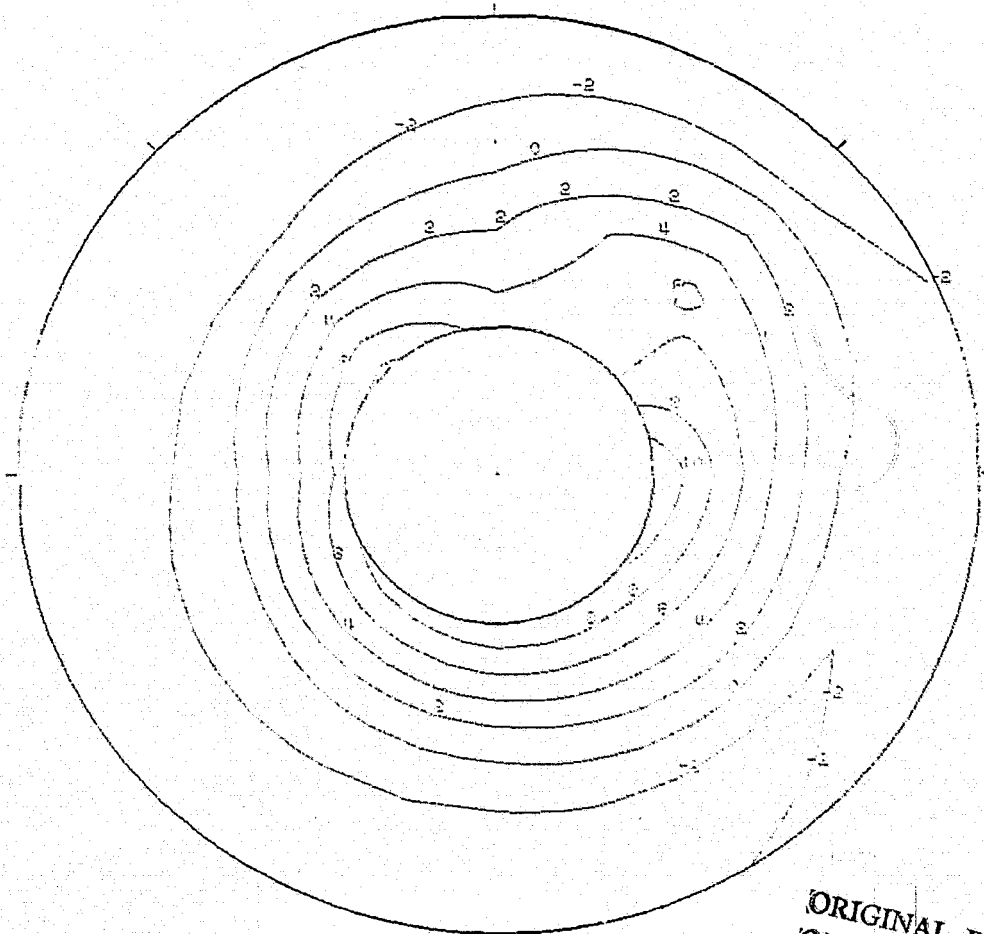
FIGURE G-79 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 7 IDENT. 79
THE SEGMENT START TIME WAS AT 20:27:47.045

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 23.0	BYPASS 0.07742 (120.0)	WAT2 63.1%	QIVV -25.0
PI 42.08 (6.103)	PI/P3 1.005	KTHETA 0.134	KPA2 0.745	BKPA2 17.440	KPA3 17.174	KQ2 0.142	KQ3P 0.402
							Q2 0.129

79(t) Instantaneous Total Pressure Contour at Peak Instantaneous Ka_2 615 Hz



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MEAN FACE PRESSURE = 42.08 kPa (6.103 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.042405 SECONDS

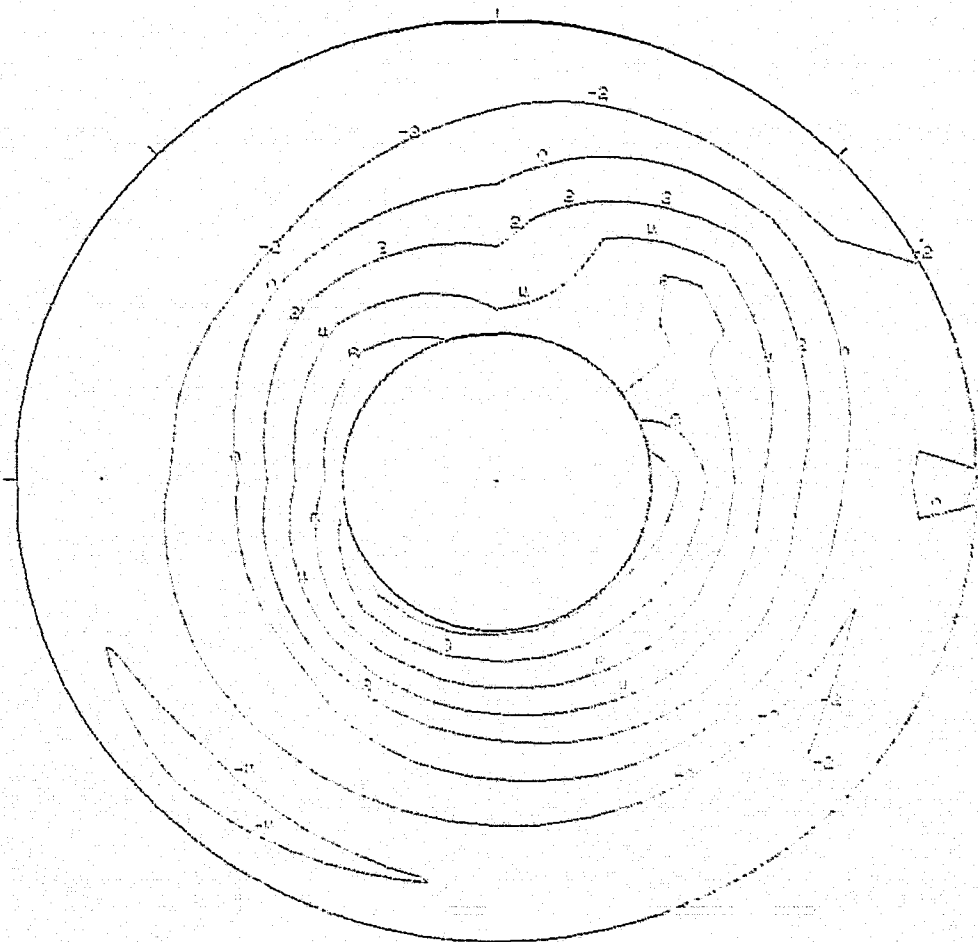
FIGURE G-79 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 7 IDENT. 79
THE SEGMENT START TIME WAS AT 20:27:47.045

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07742 (120.0)	WAT2 63.1%	CIVV -25.0
P1 42.06 (6.100)	PI/PS 1.005	KTHETA 0.362	KPA2 0.763	BKPA2 17.365	KQ2 13.313	KQ2 0.364	KOSP 0.422
							D2 0.133

79(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 1040 Hz



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MEAN FACE PRESSURE = 42.06 kPa (6.100 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.042240 SECONDS

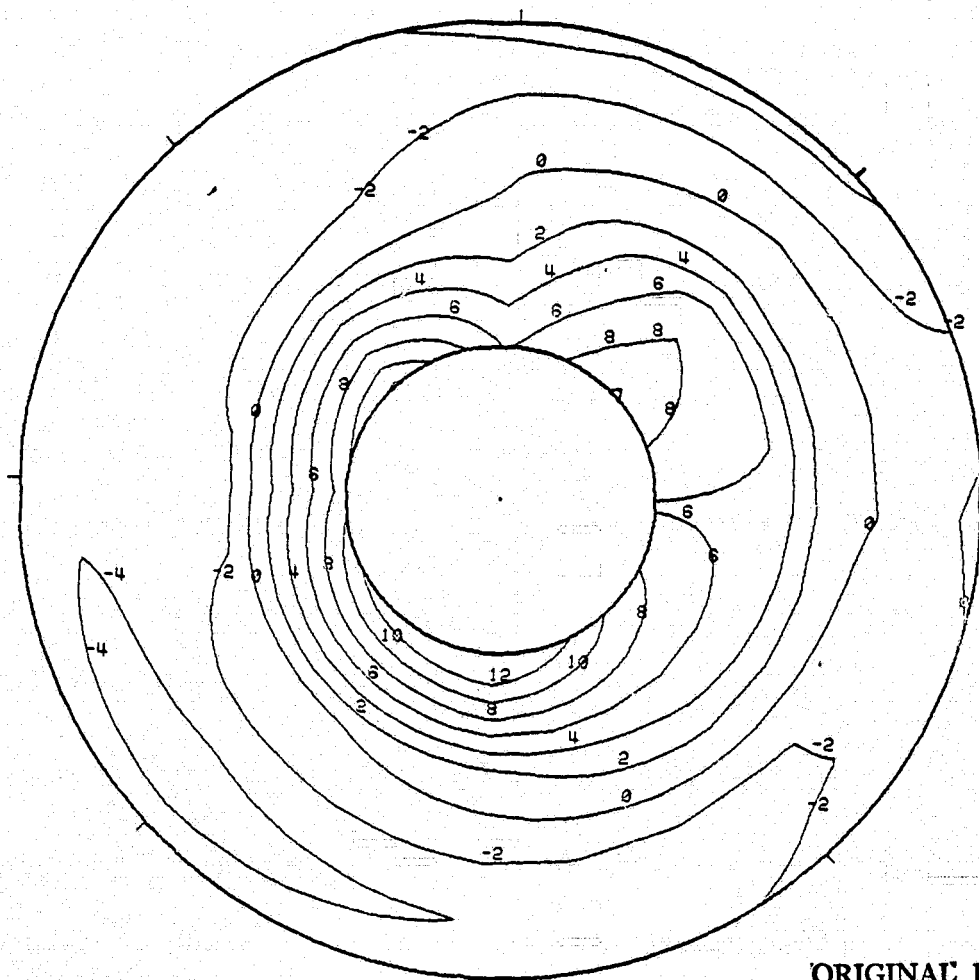
FIGURE G-79 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1%

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 7 IDENT. 79
THE SEGMENT START TIME WAS AT 20:27:47.045

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07742 (120.0)	WAT2 63.1%	CIVV -25.0
P1 42.00 (6.091)	P1/PS 1.004	KTHETA 0.405	KRA2 0.830	BKRA2 19.408	KA2 19.813	KC2 0.428	KOSP 0.471
							D2 0.152

79(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
3070 Hz



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MEAN FACE PRESSURE = 42.00 kPa (6.091 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.042210 SECONDS

FIGURE G-79 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 63.1 %

SERIES VIII - NASA Data Study
 Part/Point - 227/5, Ident 80
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.077(120.0) -25.00

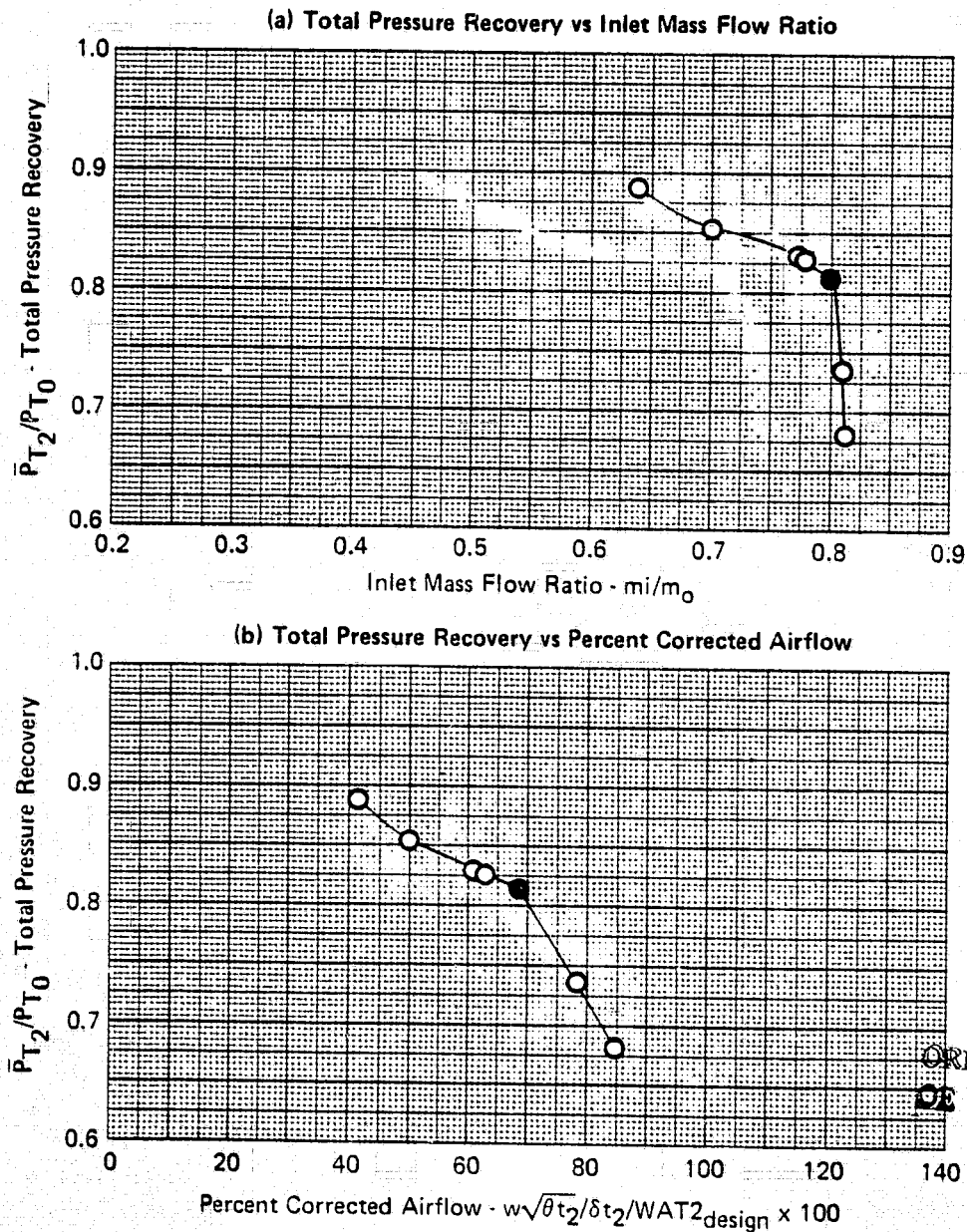


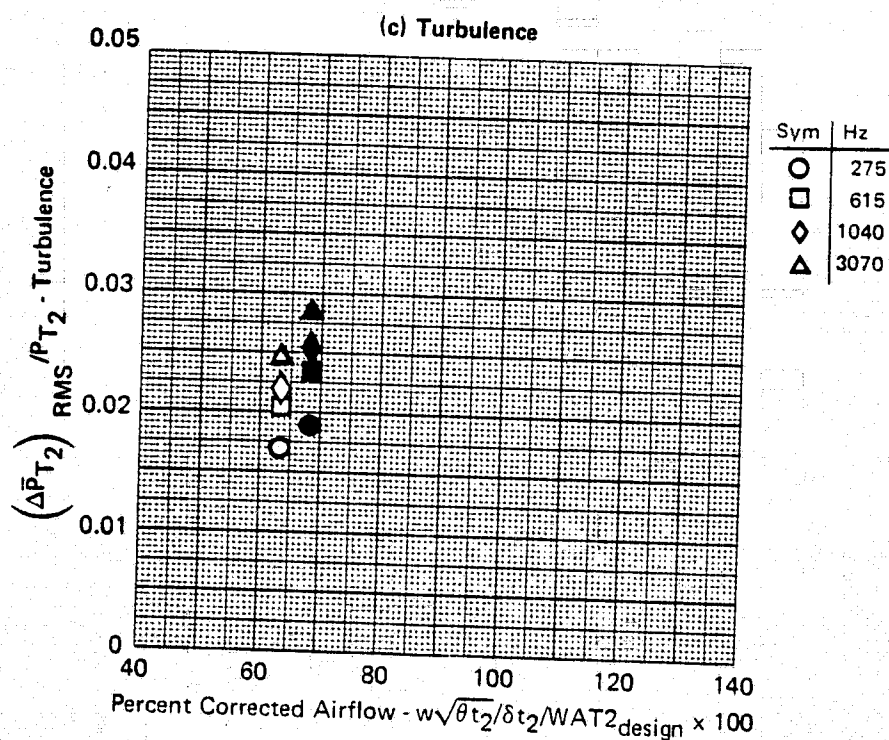
FIGURE G-80
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.2\%$

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SERIES VIII - NASA Data Study
Part/Point - 227/5, Ident 80

RHO DELTA3 BYPASS CIVV
-4.0 26.0 0.077(120.0) -25.00



GP77-0658-5

FIGURE G-80 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.2\%$

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SERIES VIII - NASA Data Study
 Part/Point - 227/5, Ident 80
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.077(120.0) -25.00

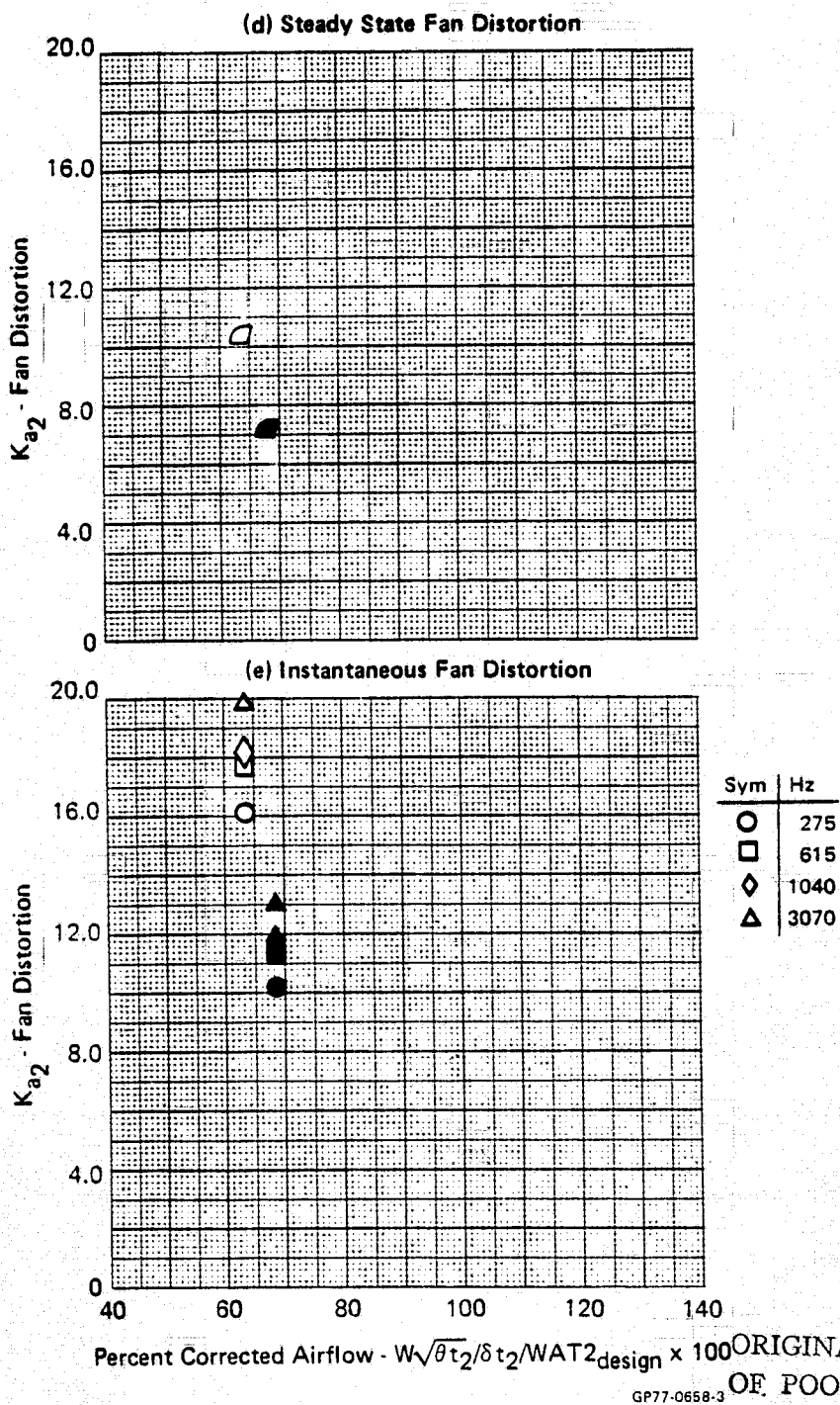
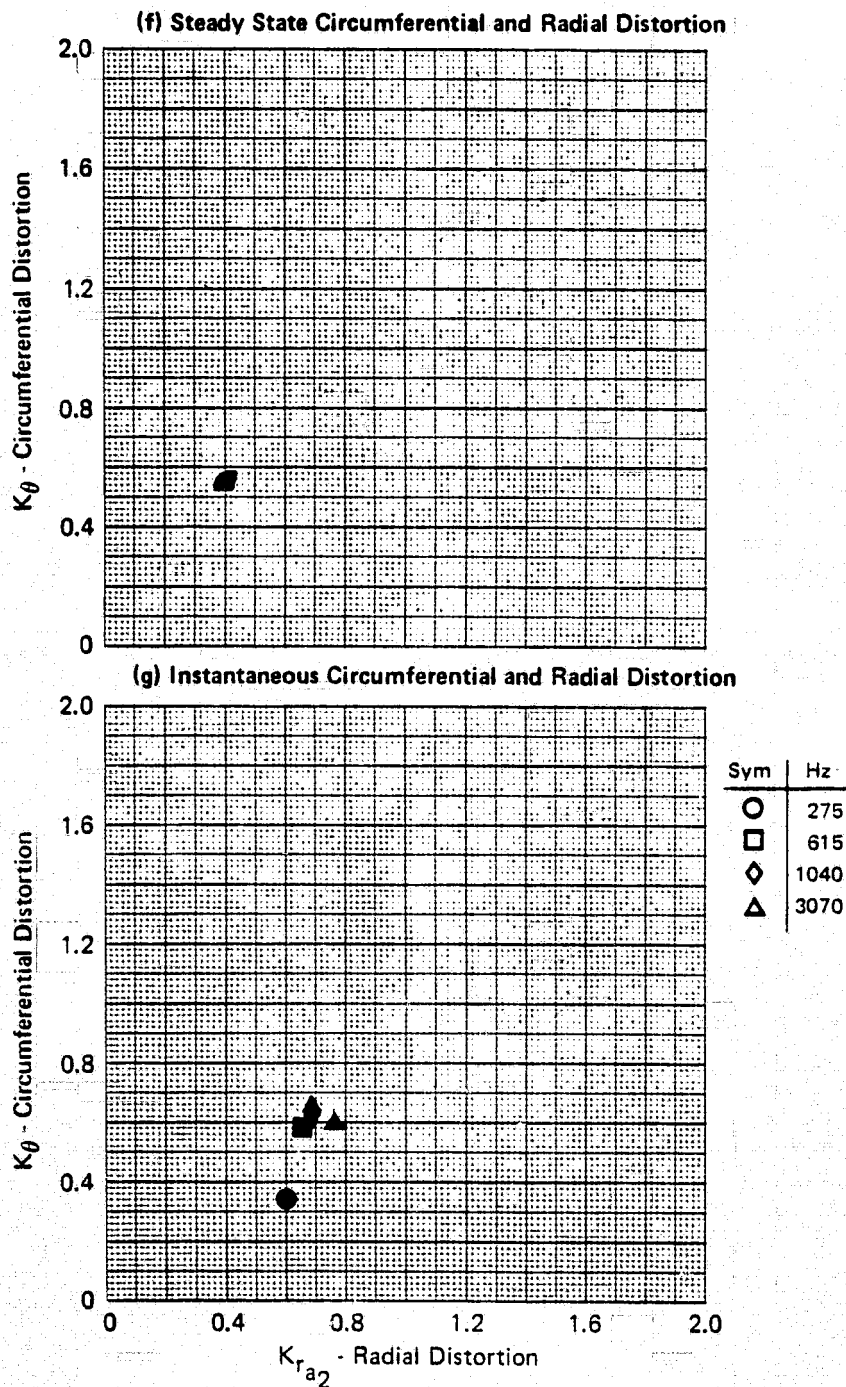


FIGURE G-80 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.2\%$

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SERIES VIII - NASA Data Study
 Part/Point - 227/5, Ident 80
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.077(120.0) -25.00



GP77-0658-2

FIGURE G-80 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.2 %

SERIES VIII - NASA Data Study
Part/Point - 227/5, Ident 80

RHO DELTA3 BYPASS CIVV
-4.0 26.0 0.077(120.0) -25.00

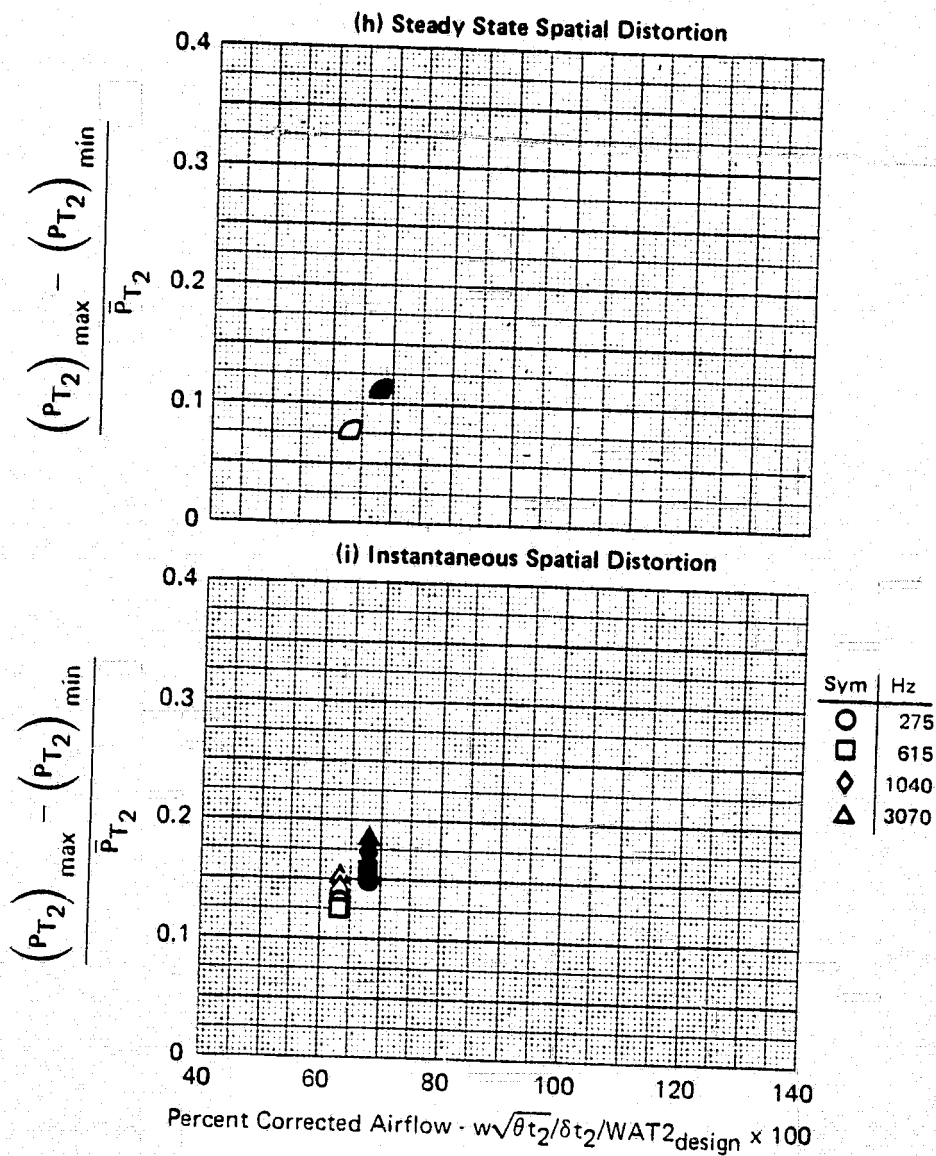


FIGURE G-80 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.2\%$

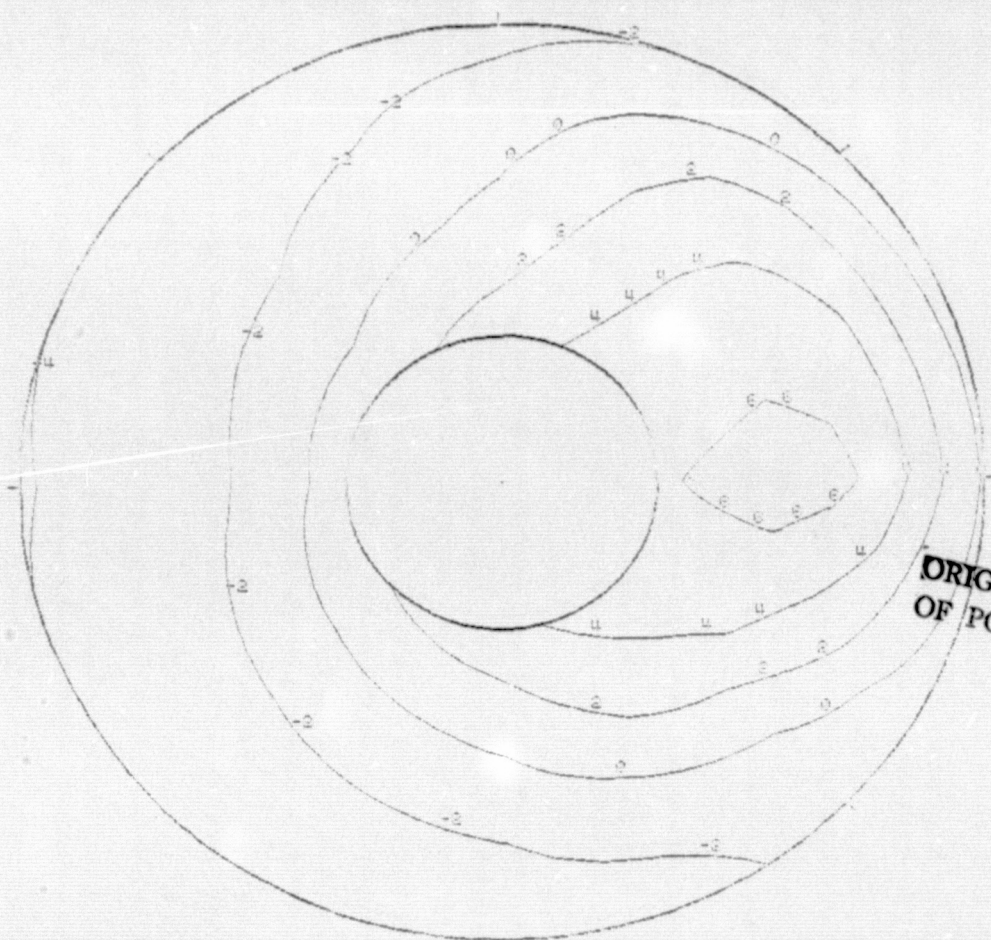
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SERIES VIII - NASA DATA STUDY

DATA POINT/POINT 227 / 5 IDENT. 80
THE SEGMENT START TIME WAS AT 20:25:49.044

MACH	ALPHA	BETA	RHO	DELTA3	BYPCSS	WAT2	QIVV
2.5	0	0	-1.7	23.0	0.07742 (120.0)	68.2%	-25.0
41.23 (5.980)	0.000	0.000	0.000	0.000	0.000	0.000	0.000

80 (j) Steady State Total Pressure Contour



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MEAN FACE PRESSURE = 41.23 kPa (5.980 PSIA)

NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-80 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

$M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.2\%$

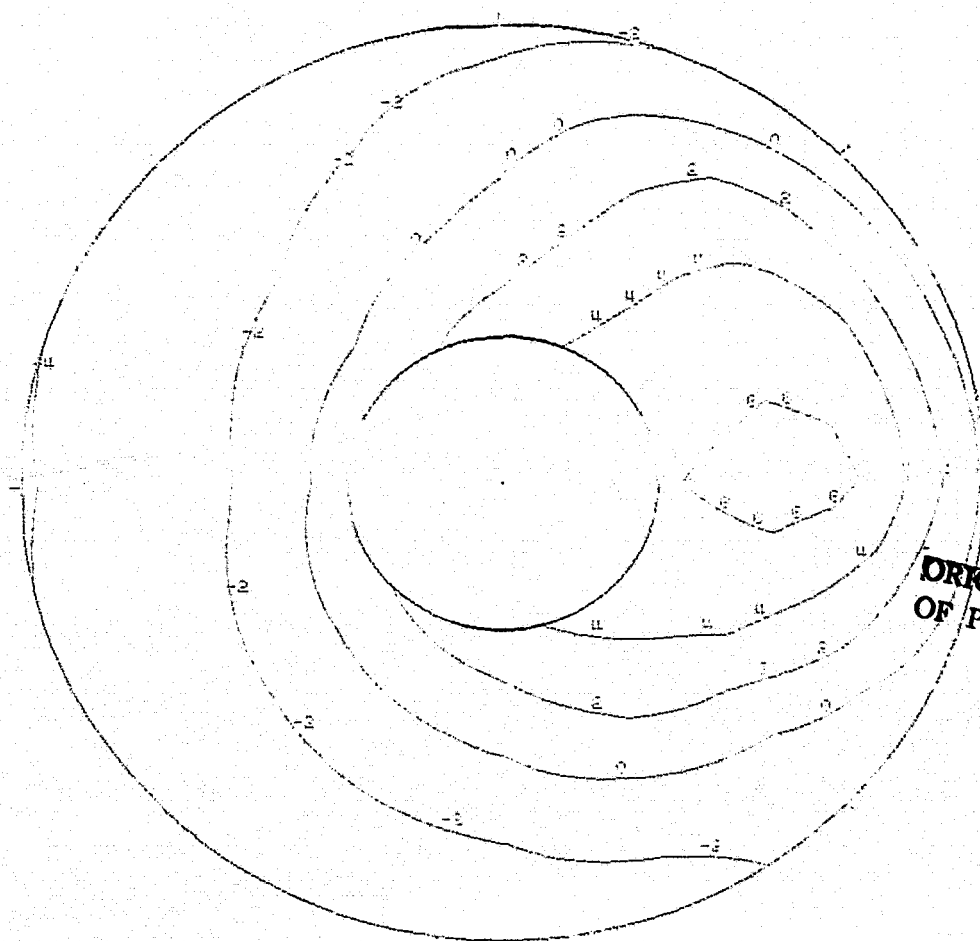
SERIES VIII - NASA DATA STUDY

DATA IDENTIFICATION 247 15 IDENT. 80
THE REGIMENT START TIME WAS AT 20:25:49.044

MOCH	ALPHA	BETA	RHO	DELTA	BYPASS	WAT2	QIVV
1.2	0.0	0.0	1.0	25.0	0.07742 (120.0)	68.2%	0.0570

41.23 (5.980)

80 (j) Steady State Total Pressure Contour



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MEAN FACE PRESSURE = 41.23 kPa (5.980 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

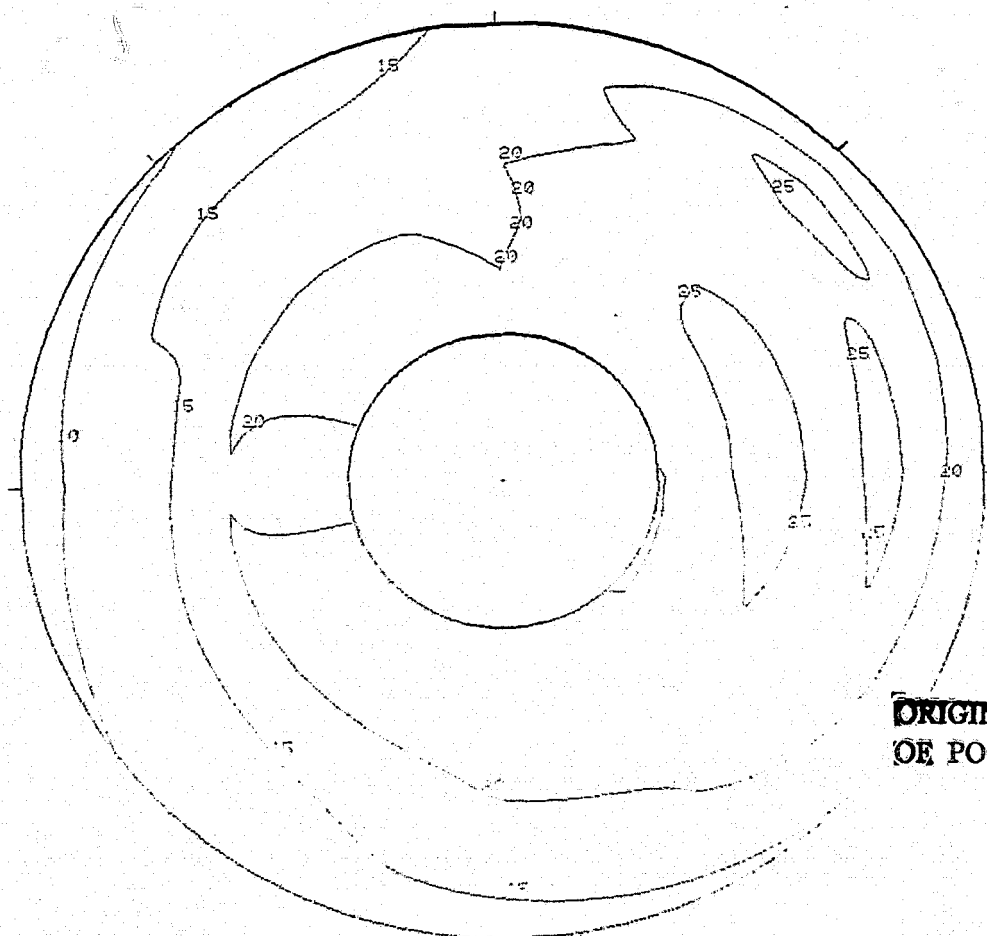
FIGURE G-80 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.2 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 5 IDENT. 80.
THE SEGMENT START TIME WAS AT 20:25:49.044

MACH 2.5	ALPHA 0	BETA 0	BWQ -14.0	DELTA2 35.0	BYPASS 0.07742 (120.0)	WAT2 68.2%	CIVV -25.0
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80(k) Turbulence Contour 275 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01894

FIGURE G-80 (Continued)

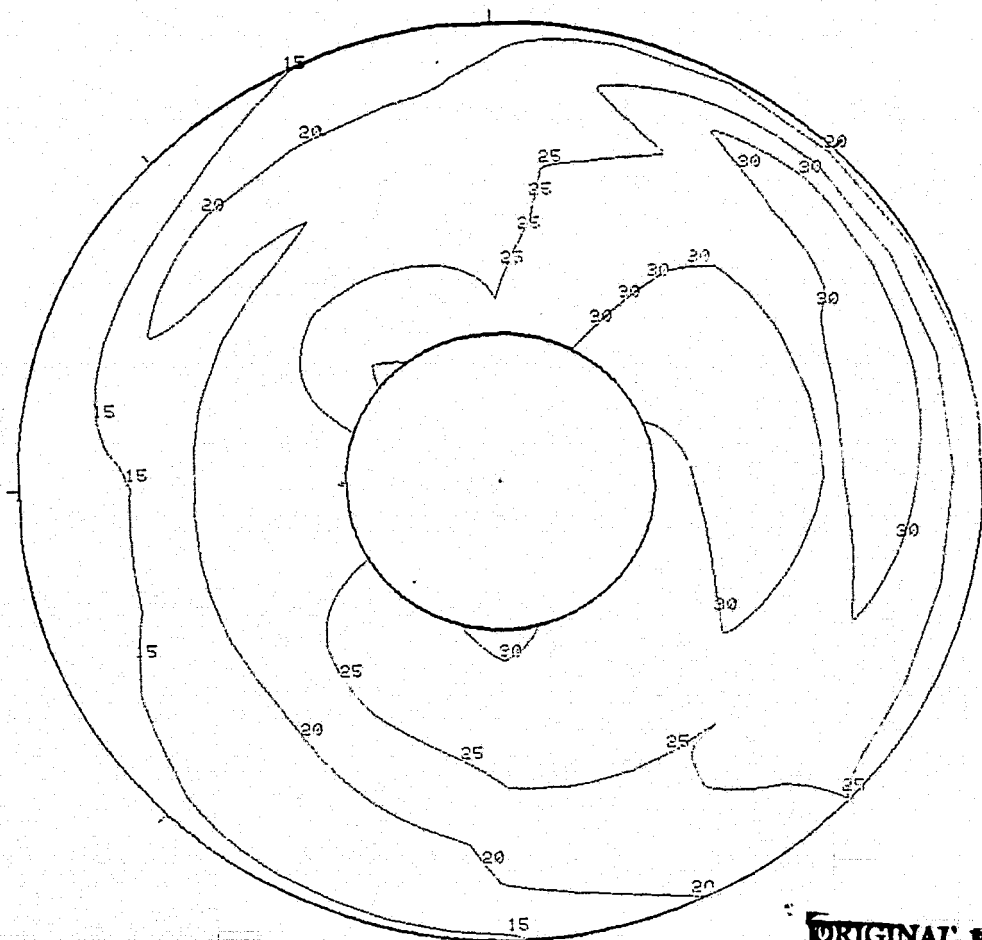
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.2 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 5 IDENT. 80
THE SEGMENT START TIME WAS AT 20:25:49.044

MACH 2.5	ALPHA 0	BETA 0	RHO -4.7	DELTA3 26.0	BYPASS 0.07742 (120.0)	WAT2 68.2%	CIVV -25.7
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80(I) Turbulence Contour 615 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02351

FIGURE G-80 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

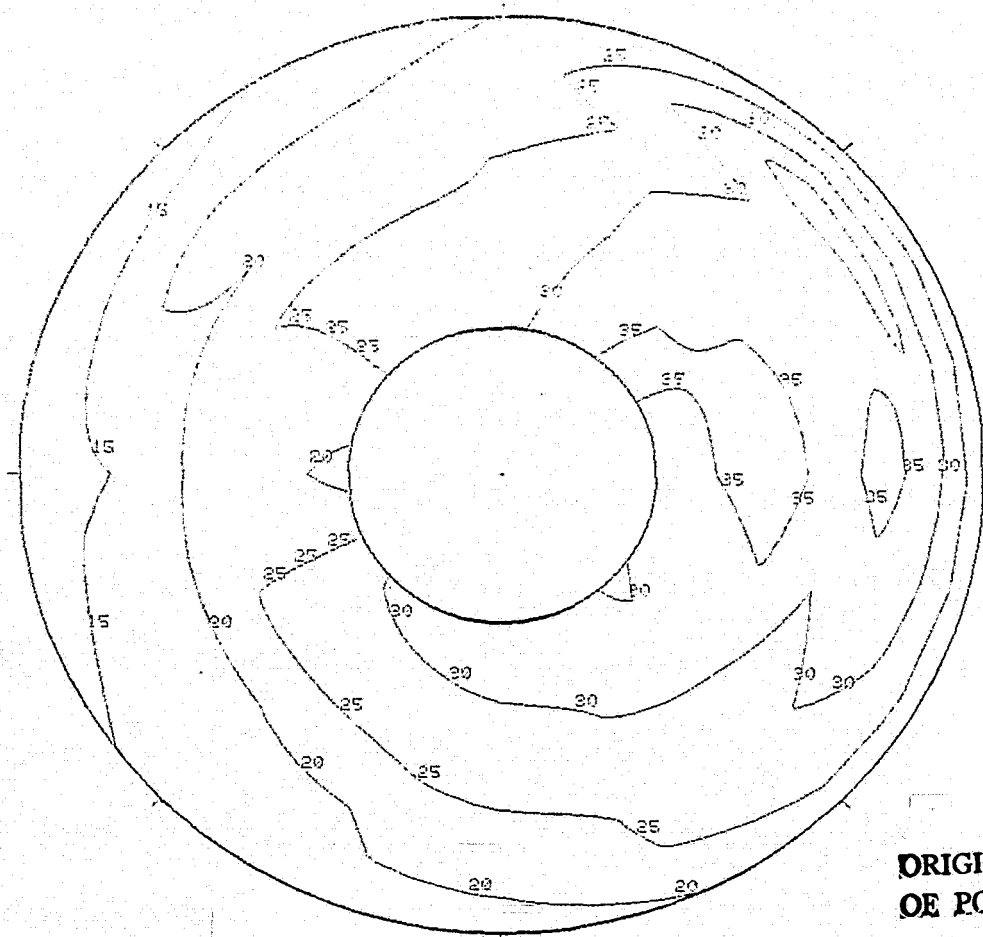
$M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.2 %

SERIES VIII - NSA DATA STUDY

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 TIME 000000Z APR 68 1000 000000Z

CIVV
-25.0

80(m) Turbulence Contour
1040 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02535

FIGURE G-80 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

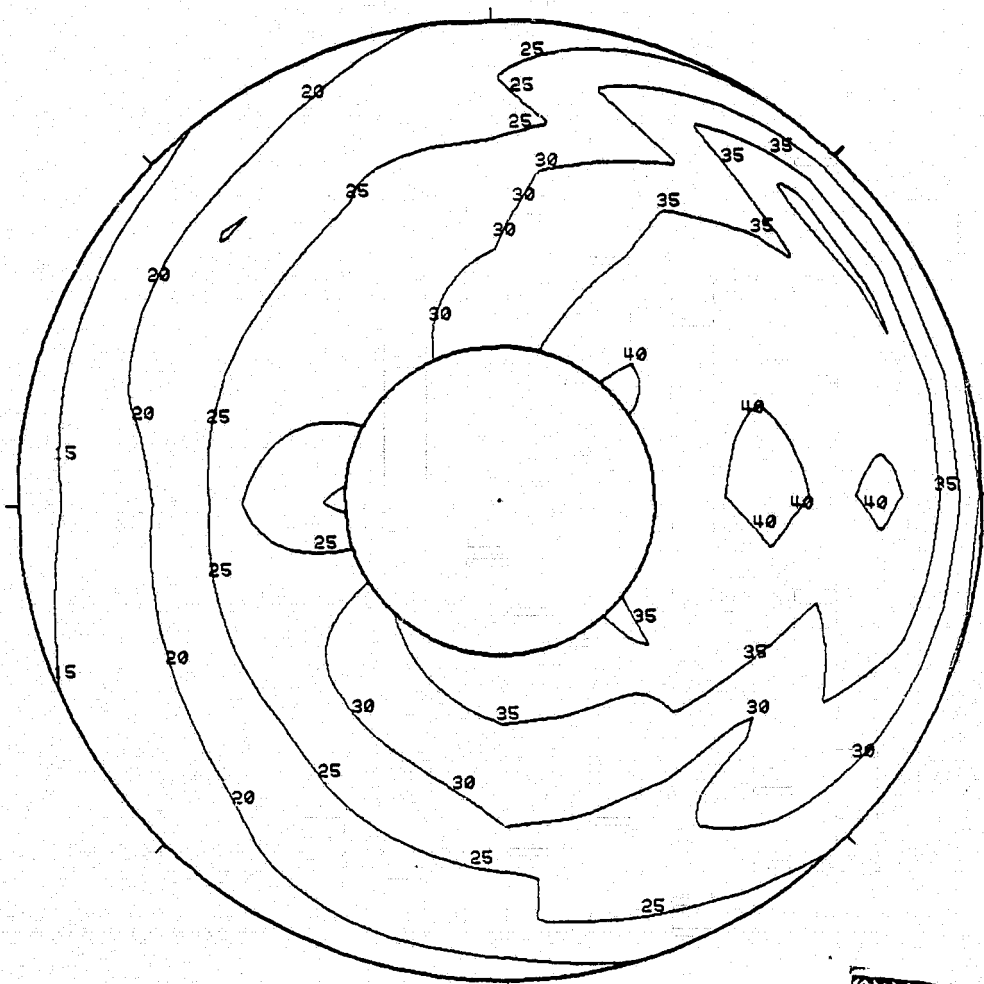
$M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.2 %

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 5 IDENT. 80
THE SEGMENT START TIME WAS AT 20:25:49.045

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07742 (120.0)	WAT2 68.2%	CIVV -25.0
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80(n) Turbulence Contour 3070 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02836

FIGURE G-80 (Continued)

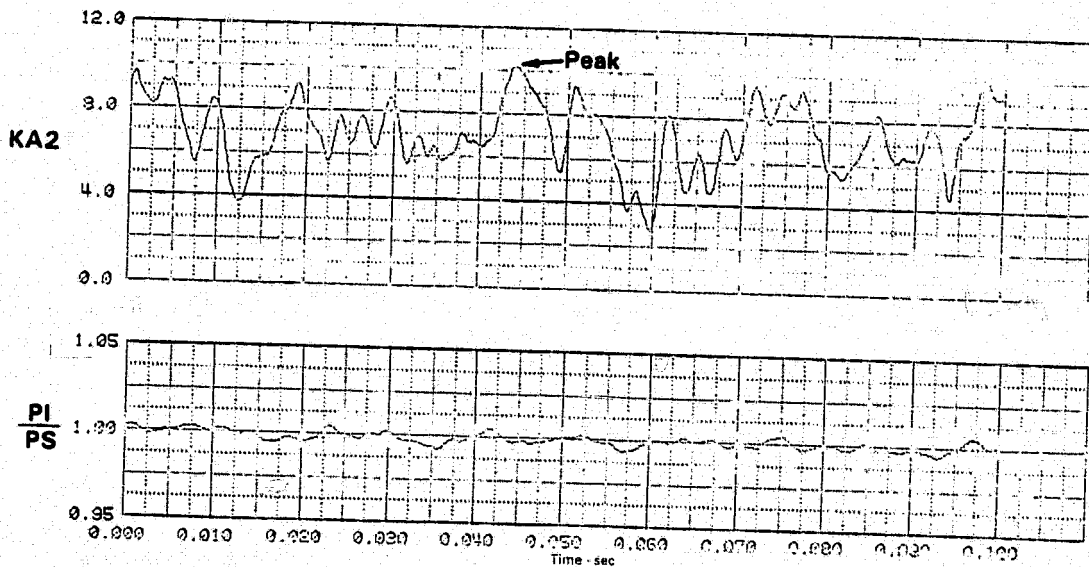
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.2\%$

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 5 IDENT. 80
THE SEGMENT START TIME WAS AT 20:25:40.044

MACH 2.5	ALPHA 0	BETA 0	PHO -4.0	DELTA2 26.0	WAT2 0.07742 (120.0)	WAT2 68.2%	CIVV -25.0
PI 41.13 (5.966)	PI/PS 0.000	IKTHETA 0.341	KRA2 0.801	BKRA2 4.061	KR2 10.202	KR2 0.352	WSP 0.047
							D2 0.150

80(o) Time History Plots
275 Hz



PEAK AT TIME = 0.043890 SECONDS

FIGURE G-80 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.2%

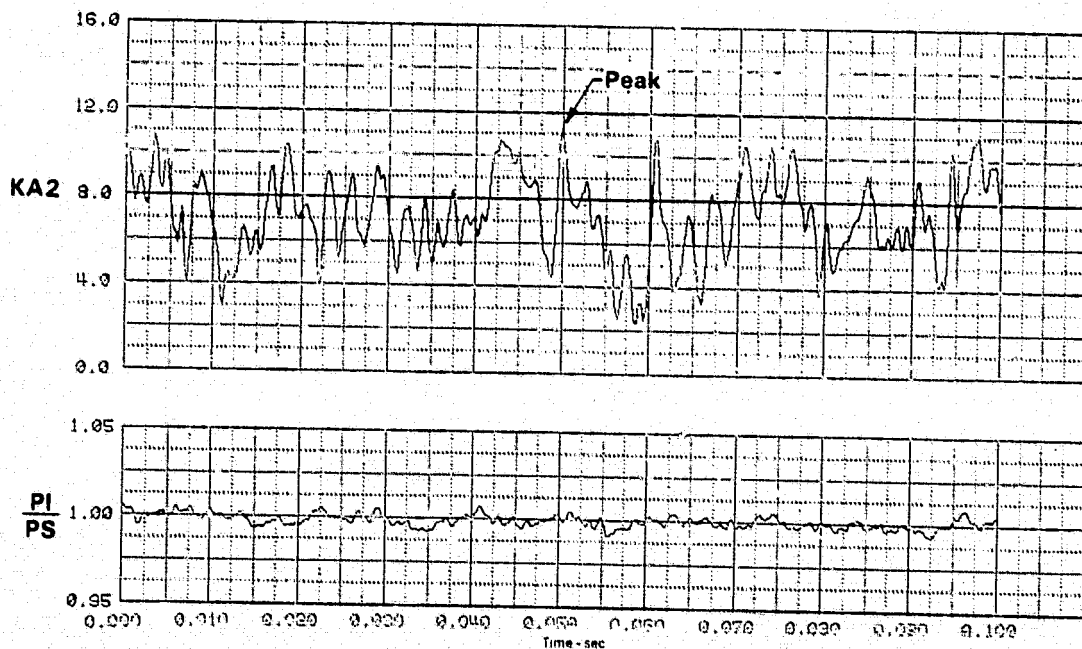
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 5 IDENT. 80
THE SEGMENT START TIME WAS AT 20:25:49.044

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07742 (120.0)	WAT2 68.2%	CIVV -25.0
P1 41.37 (6.000)	P1/P2 1.003	KTHETA 0.584	KRA2 0.651	SKRA2 10.633	KA2 11.273	KC2 0.549	POSS 0.631
							O2 0.160

80(p)Time History Plots 615 Hz



PEAK AT TIME = 0.049830 SECONDS

FIGURE G-80 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.2 %

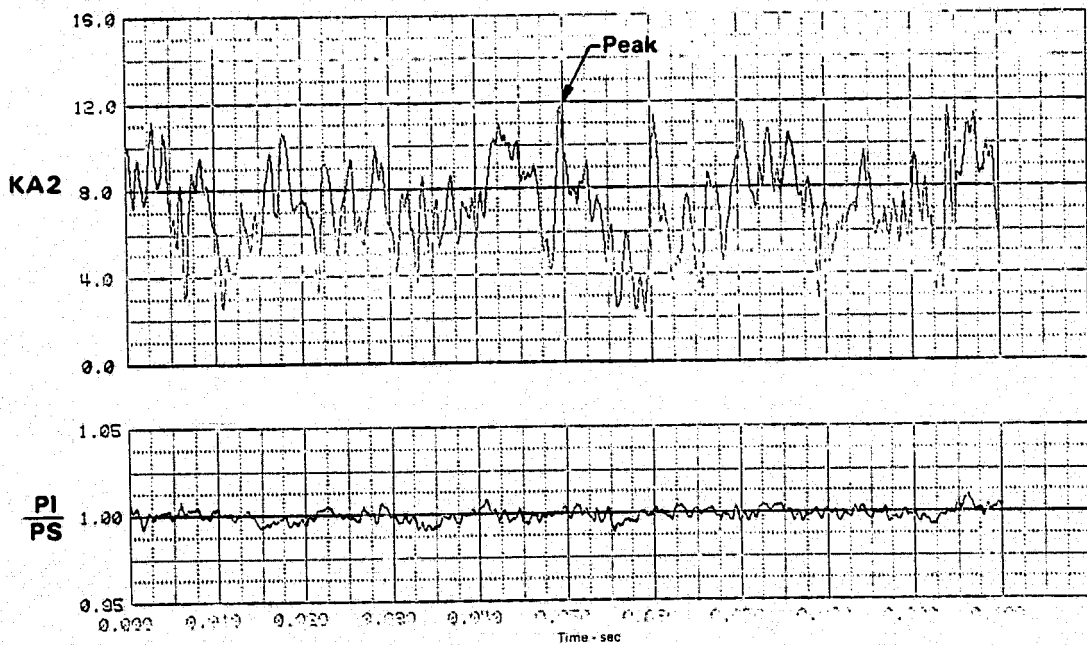
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 5 IDENT. 80
THE SEGMENT START TIME WAS AT 20:25:40.045

MOCH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA 25.0	SYNTH 0.07742 (120.0)	WAT 68.2%	QIVV -25.0
PI 41.40 (6.005)	PI/PS 1.004	THETA 0.642	MPA2 0.030	BPFA2 11.162	MAS 11.094	POC 0.505	POSP 0.584
							DS 0.171

80(q) Time History Plots 1040 Hz



PEAK AT TIME = 0.049665 SECONDS

FIGURE G-80 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.2 %

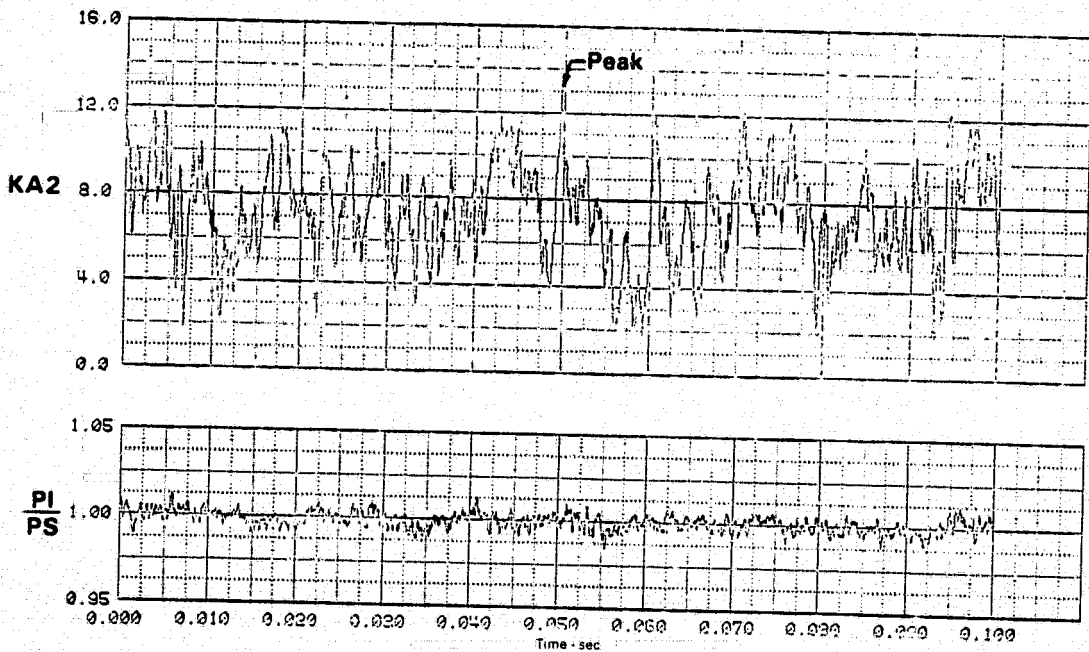
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 5 IDENT. 80
THE SEGMENT START TIME WAS AT 20:25:49.245

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 68.2%	CIVV -25.0
PI 41.42 (6.007)	PI/PS 1.025	KTHETA 0.594	KRA2 0.759	BKRA2 12.456	KA2 13.050	KC2 0.557	KOSP 0.733
							D2 0.186

80(r) Time History Plots 3070 Hz



PEAK AT TIME = 0.049590 SECONDS

FIGURE G-80 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.2\%$

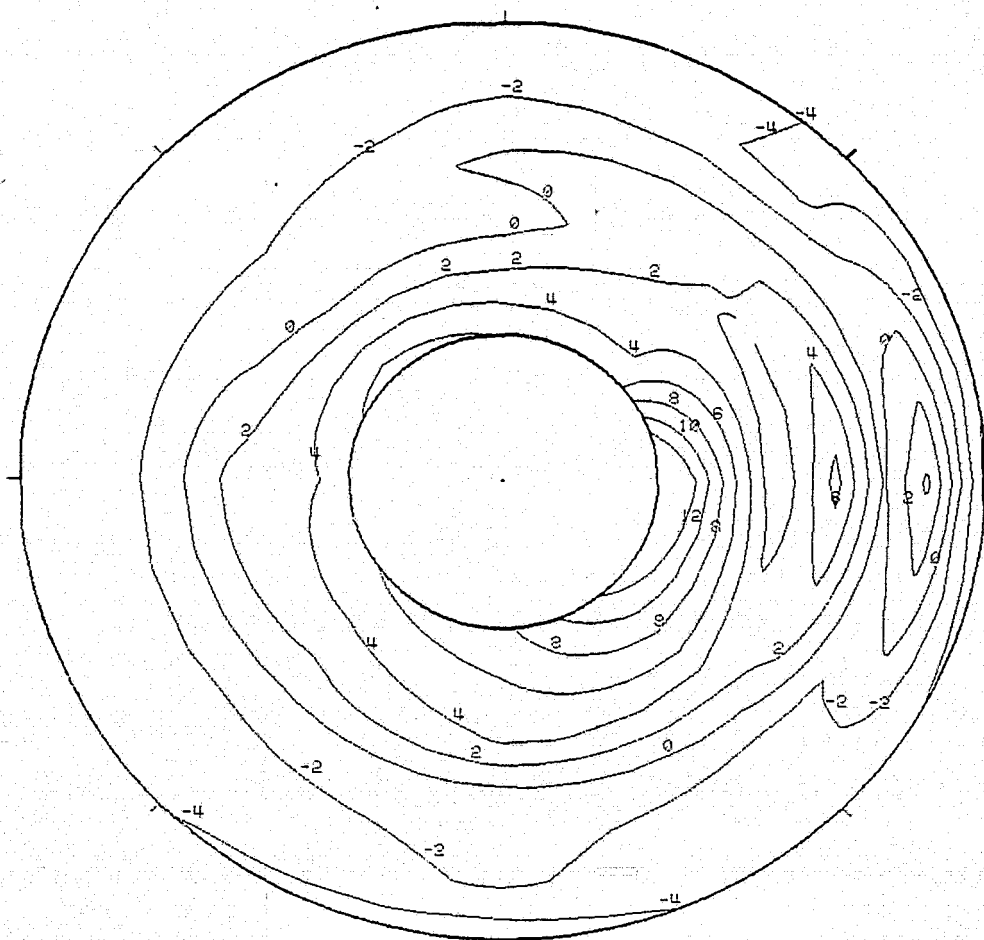
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 5 IDENT. 80
THE SEGMENT START TIME WAS AT 20:25:49.044

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07742 (120.0)	WAT2 68.2%	CIVV -25.0
P1 41.13 (6.966)	P1/PS 0.998	KTHETA 0.341	KRA2 0.501	BKRA2 9.861	KA2 10.202	KC2 0.353	KOSP 0.447
							D2 0.150

**80(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
275 Hz**



MEAN FACE PRESSURE = 41.13 kPa (6.966 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.043890 SECONDS

FIGURE G-80 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.2 %

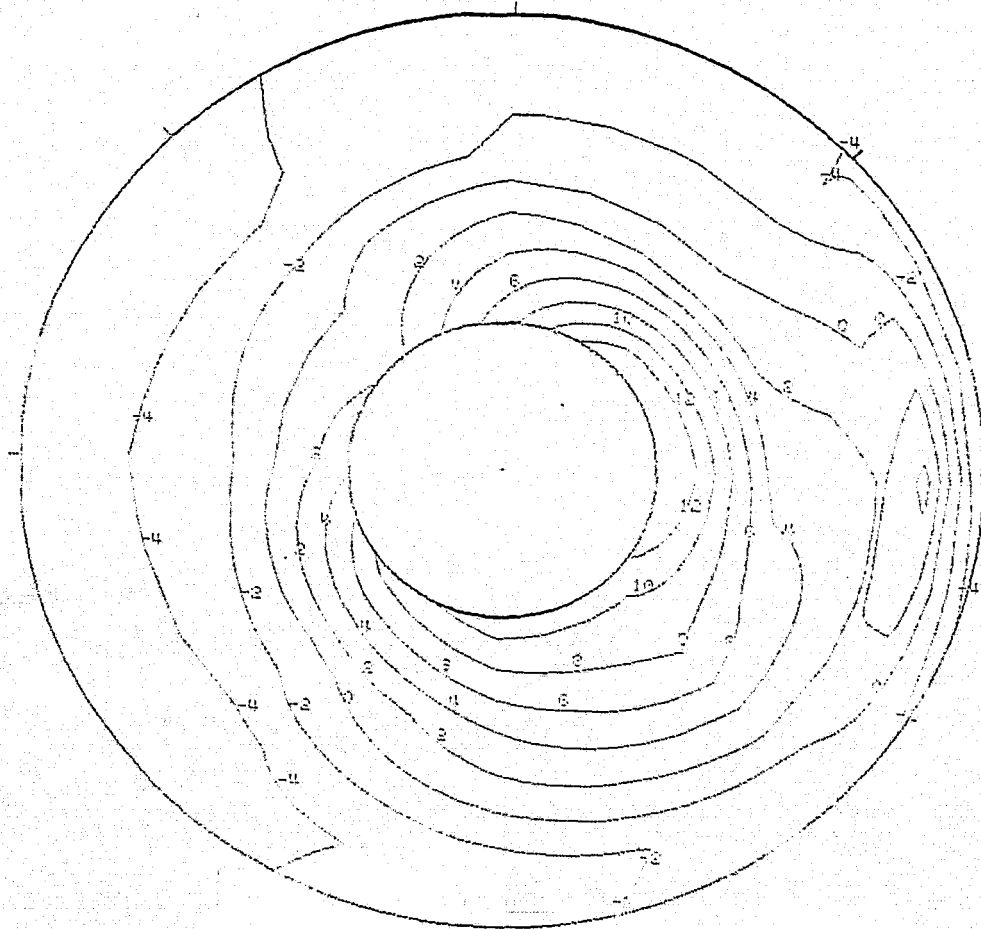
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 5 IDENT. 80
THE SEGMENT START TIME WAS AT 20:25:49.044

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07742 (120.0)	WAT2 68.2%	CIVV -25.0
P1 41.37 (6.000)	P1/P3 1.003	KTHETA 0.534	KRA2 0.651	BKRA2 10.633	KA2 11.273	KC2 0.545	KOSP 0.691
							D2 0.180

80(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
615 Hz



MEAN FACE PRESSURE = 41.37 kPa (6.000 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.049830 SECONDS

FIGURE G-80 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.2 %

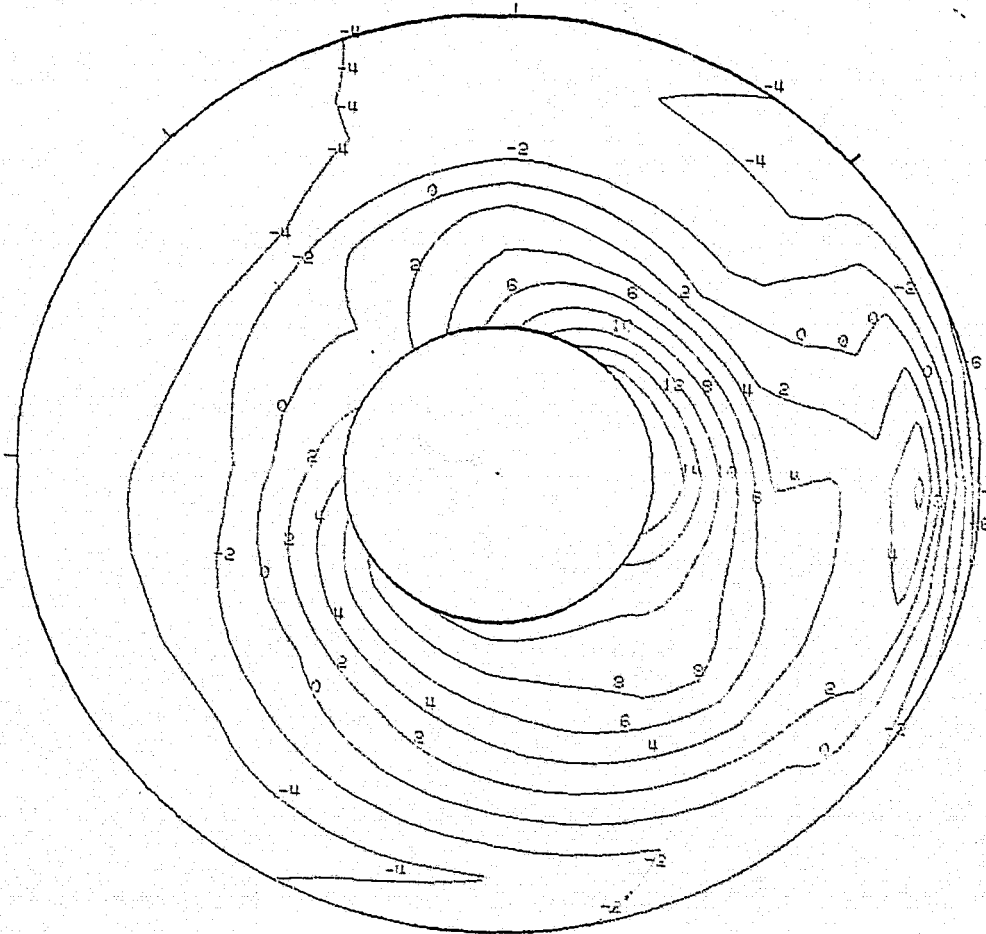
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SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 5 IDENT. **80**
THE SEGMENT START TIME WAS AT 20:25:49.045

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07742 (120.0)	WAT2 68.2%	CIVV -25.0
PI 41.40 (6.005)	PI/PS 1.004	KTHETA 0.642	KPA2 0.630	BKPA2 11.162	KA2 11.804	KC2 0.535	KOSP 0.754
							D2 0.171

**80(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
1040 Hz**



MEAN FACE PRESSURE = 41.40 kPa (6.005 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.049665 SECONDS

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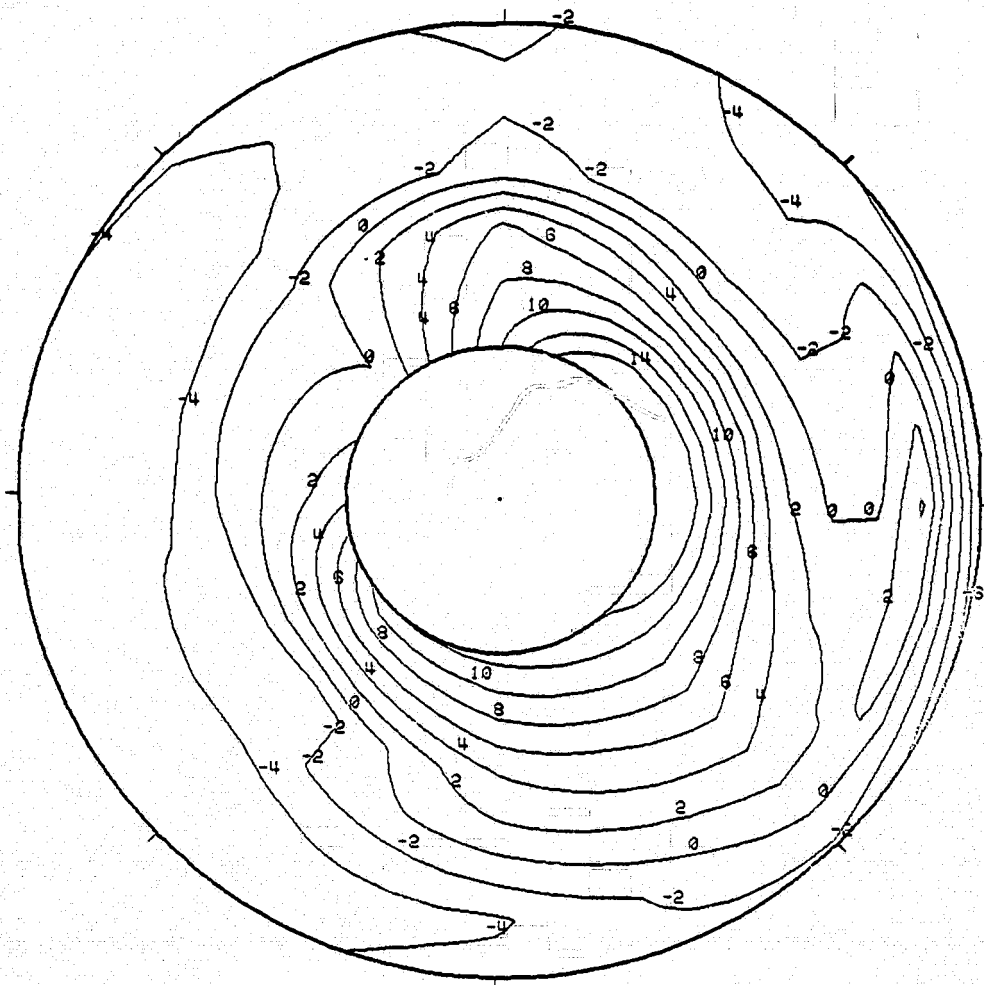
FIGURE G-80 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.2%

SERIES VIII - NASA DATA STUDY

DATA PART/POINT 227 / 5 IDENT. 80
THE SEGMENT START TIME WAS AT 20:25:49.045

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07742 (120.0)	WAT2 68.2%	CIVV -25.0
PI 41.42 (6.007)	PI/PS 1.005	KTHETA 0.594	KRA2 0.759	BKRA2 12.456	KR2 13.050	KC2 0.567	KOSP 0.738
							D2 0.186

80(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
3070 Hz



MEAN FACE PRESSURE = 41.42 kPa (6.007 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.049590 SECONDS

FIGURE G-80 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.2\%$

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FSCP - NASA Data Study
 Part/Point - 465/8, Ident 81
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.078(121.0) -25.00

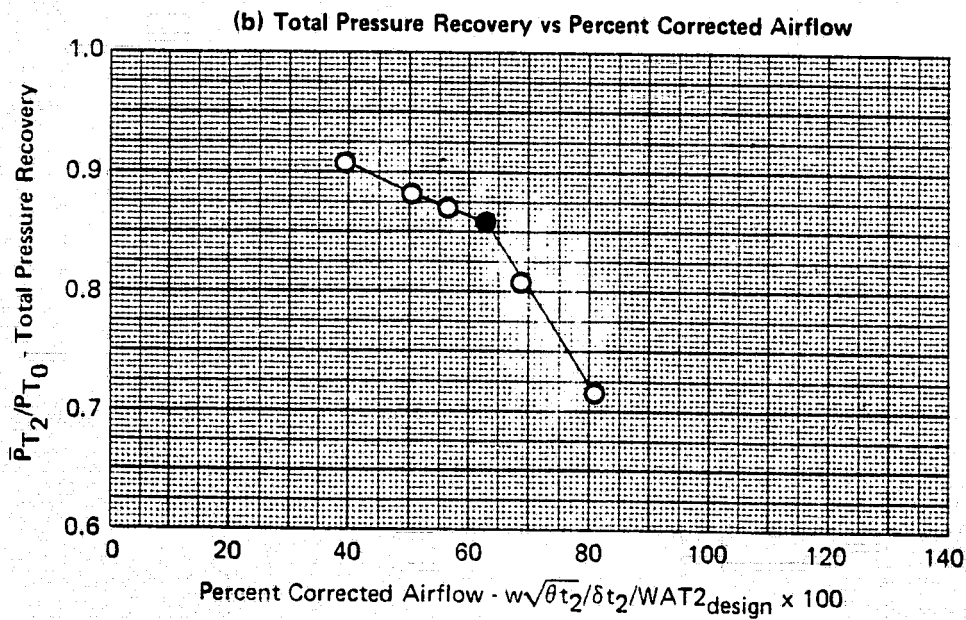
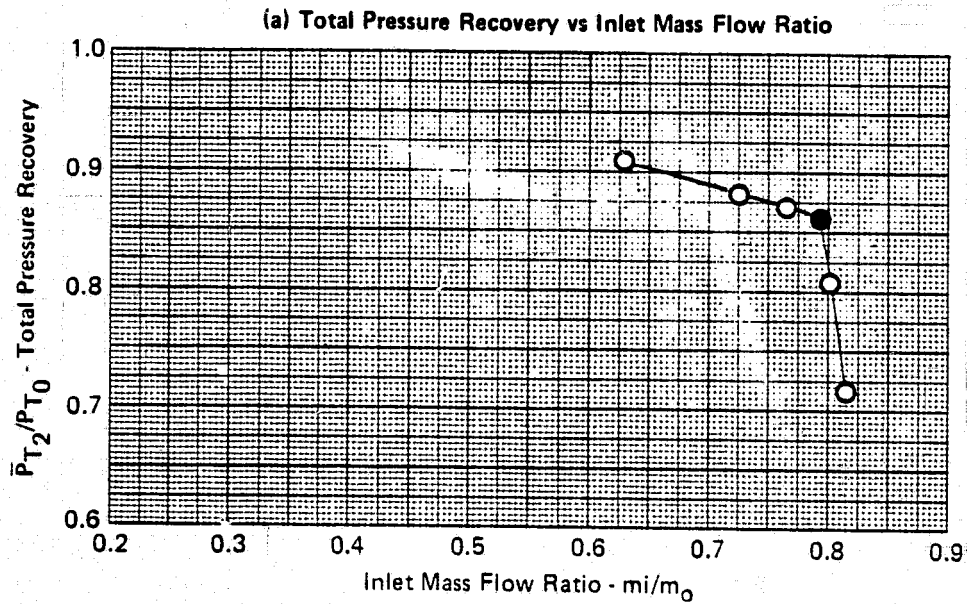
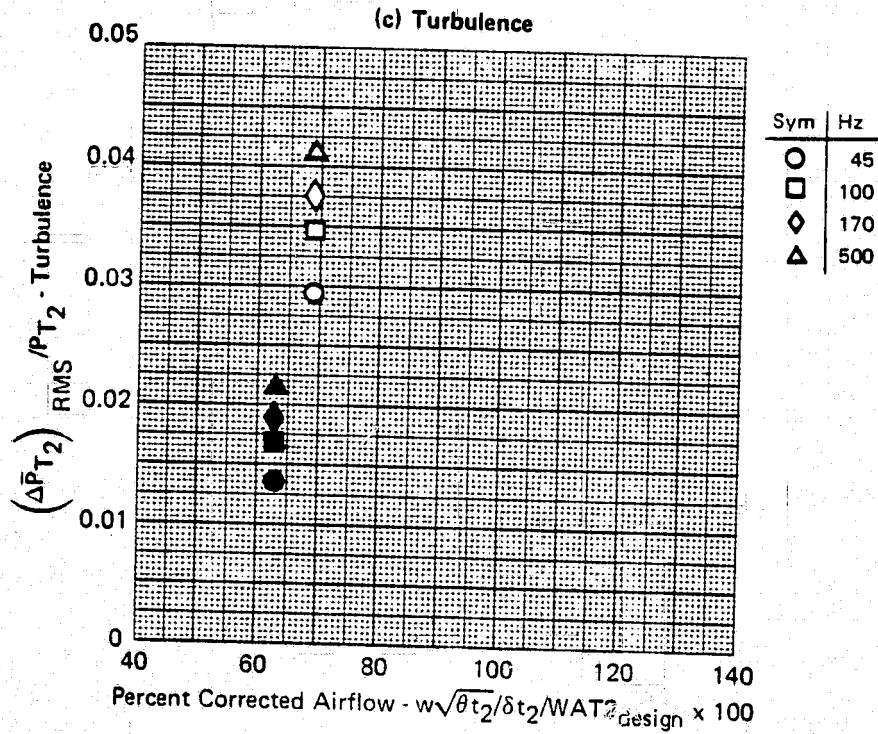


FIGURE G-81
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 62.8\%$

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FSCP - NASA Data Study
 Part/Point - 465/8, Ident 81
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.078(121.0) -25.00

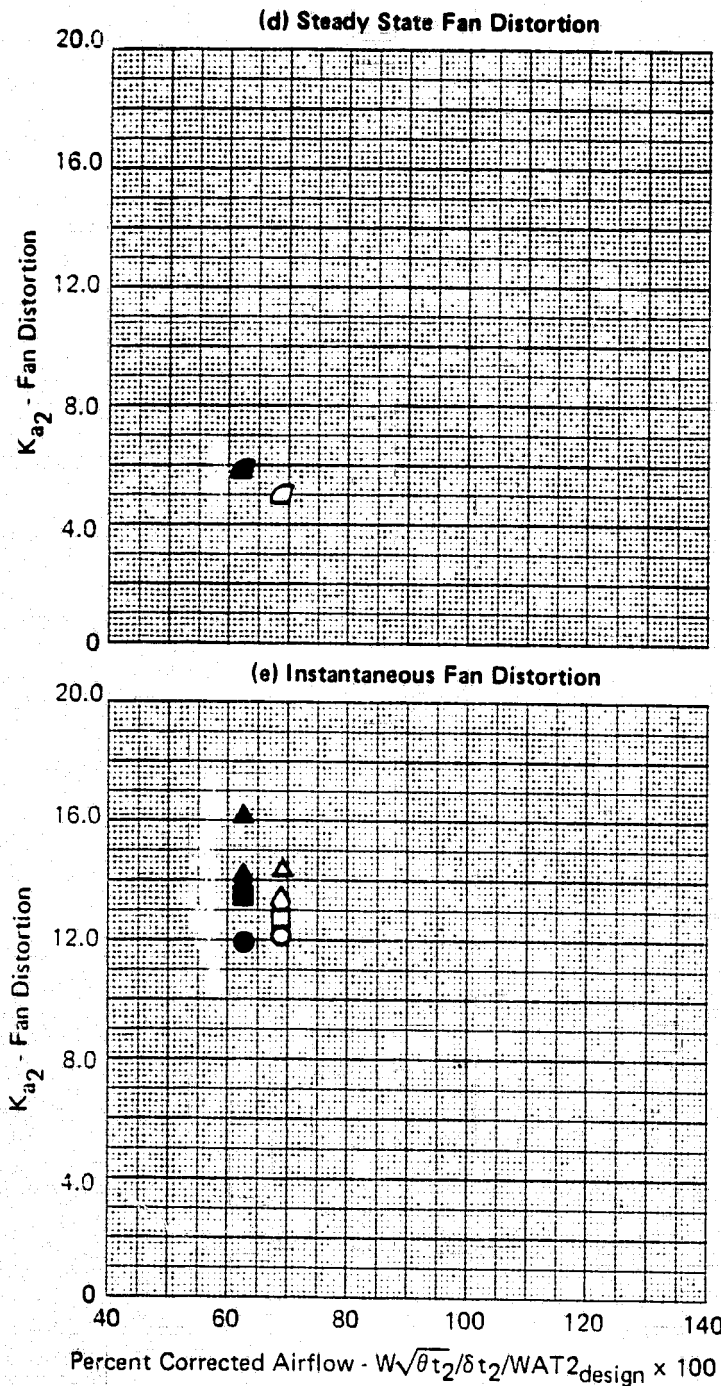


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FIGURE G-81 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 62.8\%$

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FSCP - NASA Data Study
 Part/Point - 465/8, Ident 81
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.078(121.0) -25.00



GP77-0658-3

FIGURE G-81 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 62.8\%$

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FSCP - NASA Data Study
 Part/Point - 465/8, Ident 81
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.078(121.0) -25.00

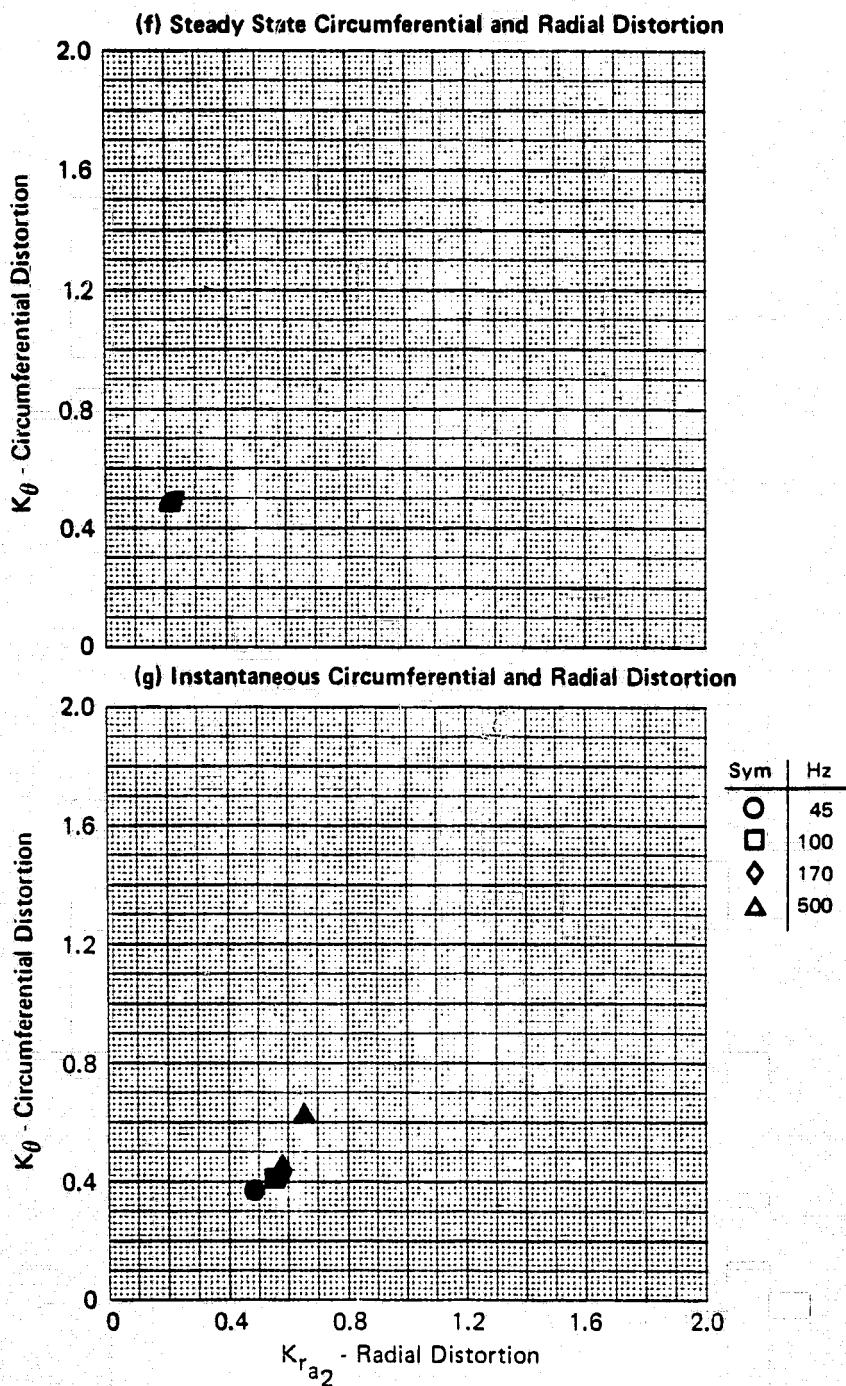
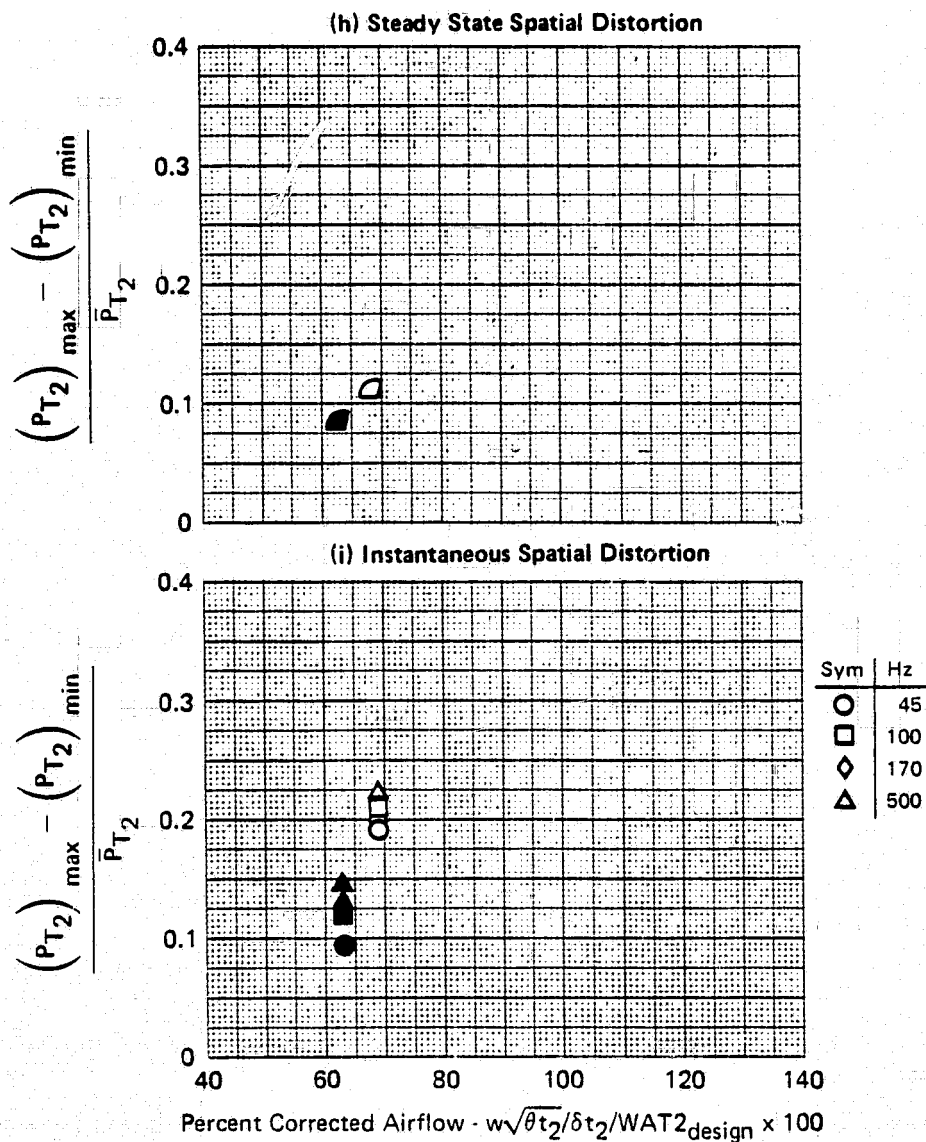


FIGURE G-81 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %

FSE - NASA Data Study
 Part/Point - 465/8, Ident 81
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.078(121.0) -25.00



GP77-0658-4

FIGURE G-81 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 62.8\%$

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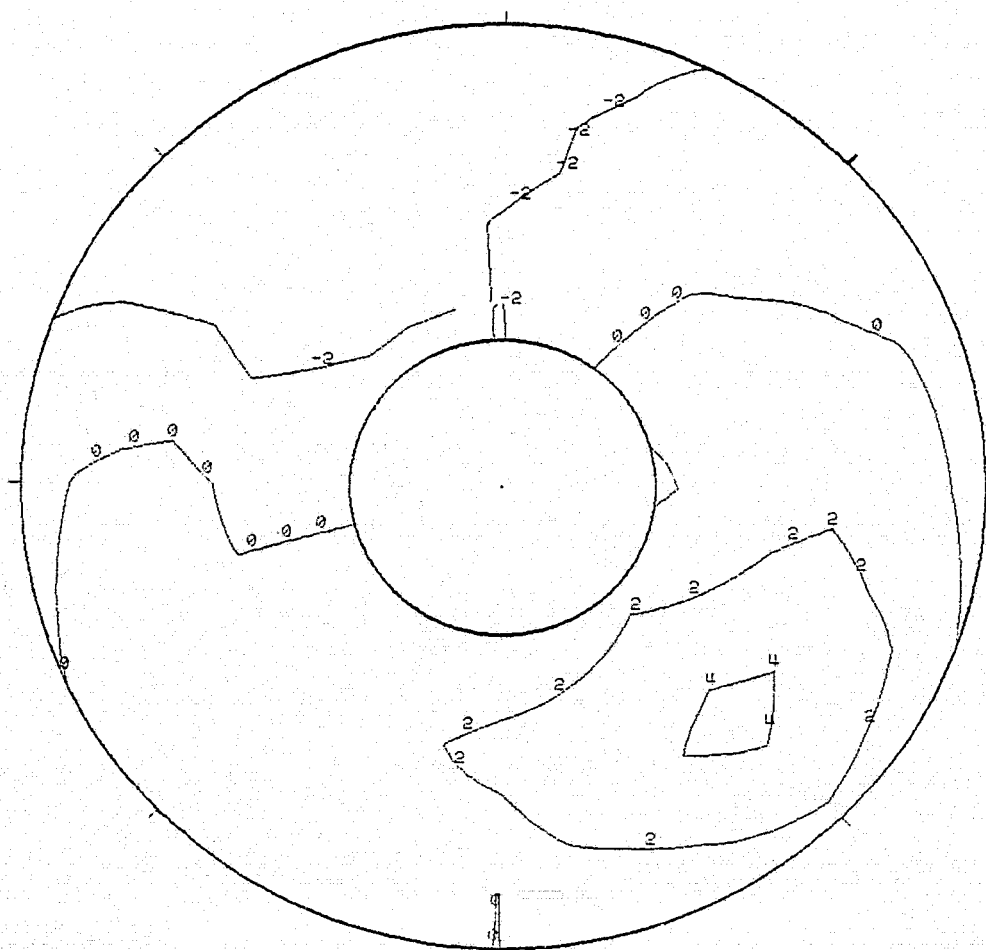
FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 8 IDENT. 81
THE SEGMENT START TIME WAS AT 3:23:40.091

MACH 2.5 ALPHA 0 BETA 0 RHO -4.0 DELTA3 25.0 BYPASS 0.07806 (121.0) WAT2 62.8% CIVV -25.0

PI 41.22 (5.978) PI/PS 1.000 KTHETA 0.473 KPA2 0.222 BKPA2 5.294 KA2 5.757 KC2 0.434 KESP 0.477 D2 0.024

81(j) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 41.22 kPa (5.978 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-81 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %

FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 8 IDENT. 812
THE SEGMENT START TIME WAS AT 3:23:40.091

MACH
2.5

ALPHA
0

BETA
0

RHO
-4.0

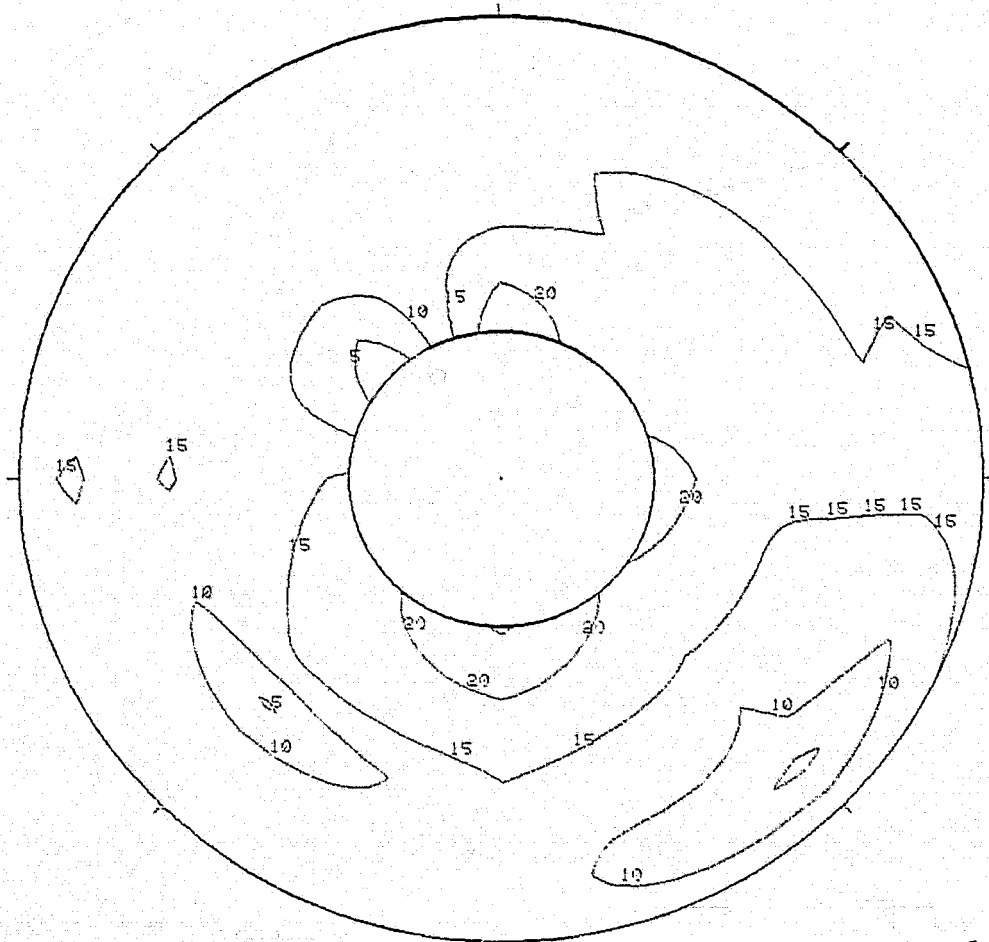
DELTA3
26.0

BYPASS
0.07806 (121.0)

WAT2
62.8%

CIVV
-25.0

81 (k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01339

FIGURE G-81 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 62.8\%$

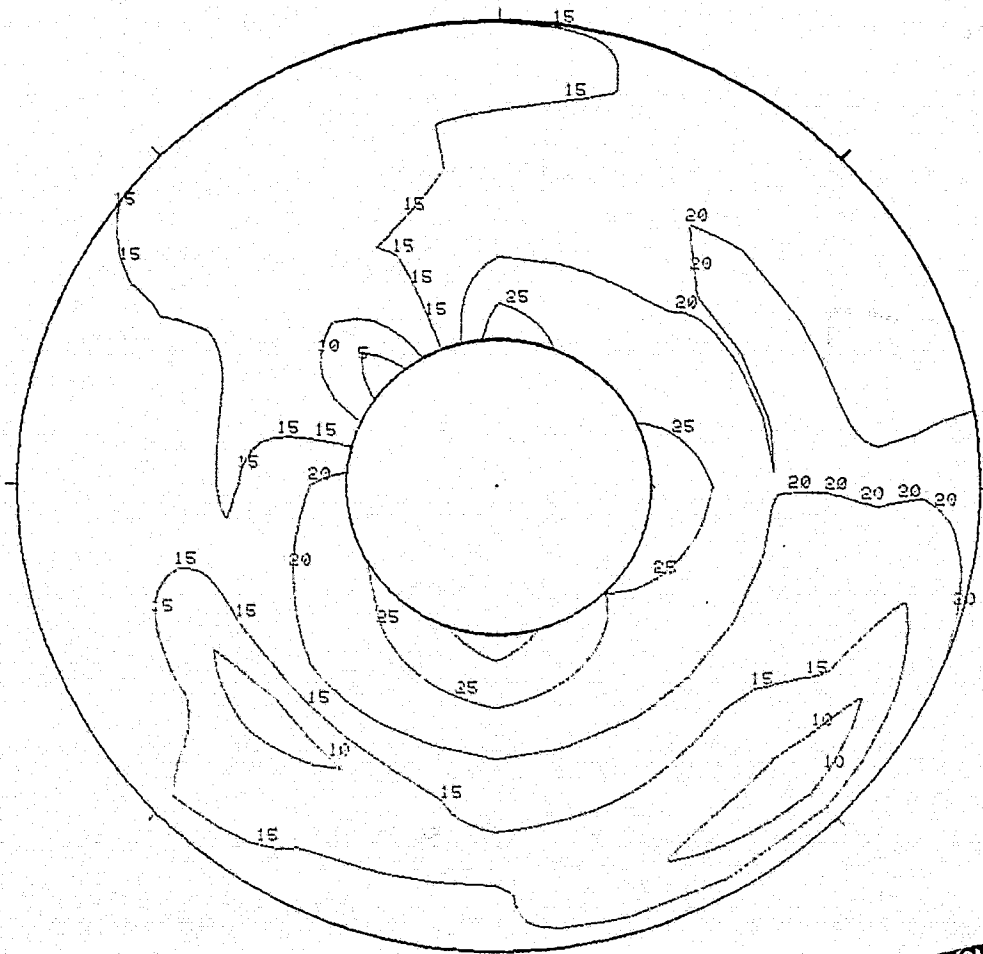
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FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 8 IDENT. 81
THE SEGMENT START TIME WAS AT 3:23:40.091

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
2.5	0	0	-4.0	26.0	0.07806 (121.0)	62.8%	-25.0

81 (I) Turbulence Contour 100 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01690

FIGURE G-81 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR

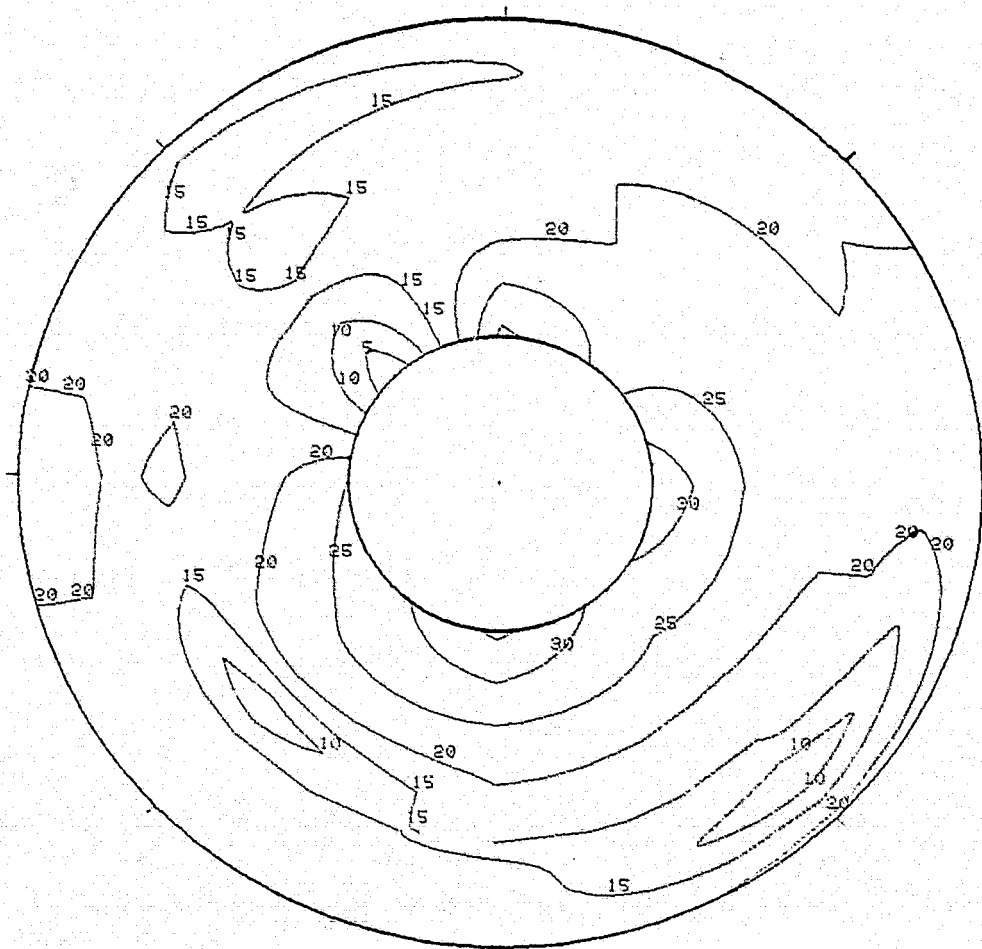
$M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %

FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 8 IDENT. .01
THE SEGMENT START TIME WAS AT 3:23:40.091

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 62.8%	CIVV -25.0
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81 (m) Turbulence Contour 170 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .01877

FIGURE G-81 (Continued)

INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %

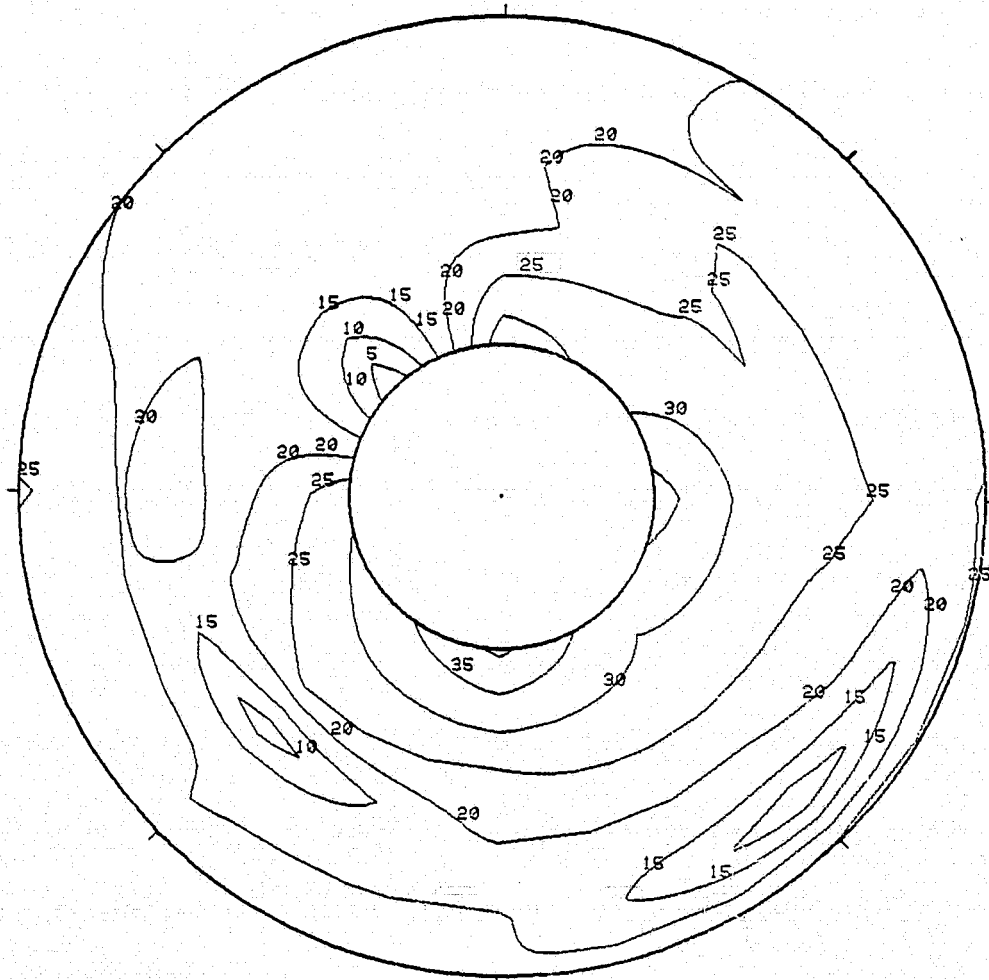
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FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 8 IDENT. 81
THE SEGMENT START TIME WAS AT 3:23:40.195

MACH	ALPHA	BETA	RHO	DELTA3	BYPASS	WAT2	CIVV
2.5	0	0	-4.0	26.2	0.07806 (121.0)	62.8%	-25.0

81(n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02135

FIGURE G-81 (Continued)

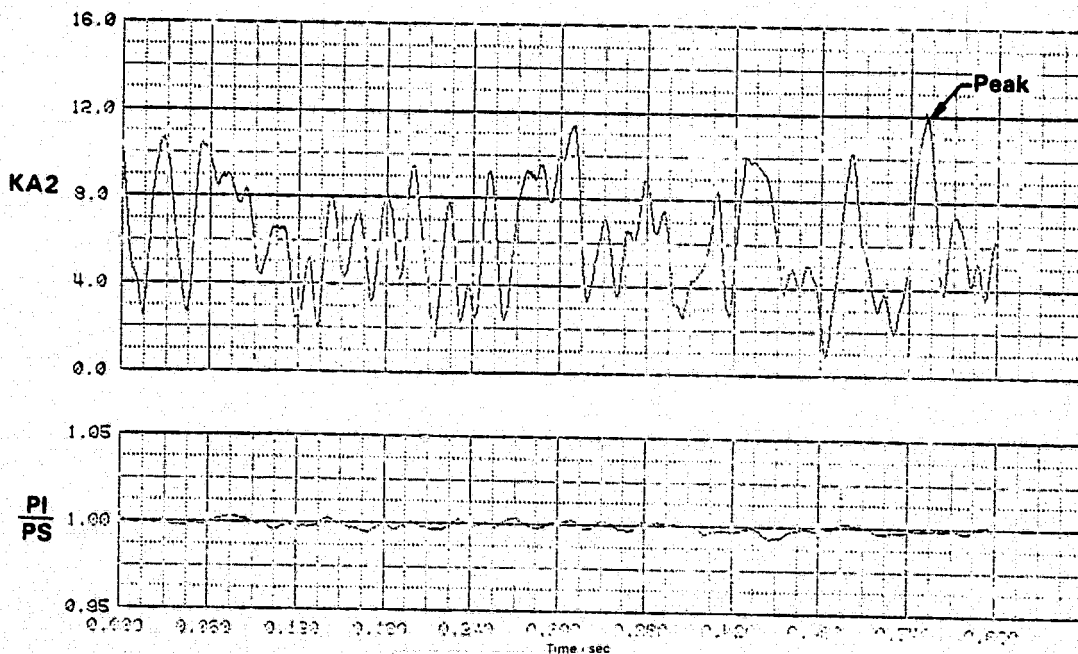
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %

FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 8 IDENT. 81
THE SEGMENT START TIME WAS AT 3:23:40.001

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 62.8%	CIVV -25.0
PI 41.18 (5.973)	PI/PS 0.999	KTHETA 0.387	KRA2 0.493	BKPA2 11.527	KA2 11.894	KC2 0.324	KOSP 0.339
							D2 0.033

81(o) Time History Plots 45 Hz



PEAK AT TIME = 0.550738 SECONDS

FIGURE G-81 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %

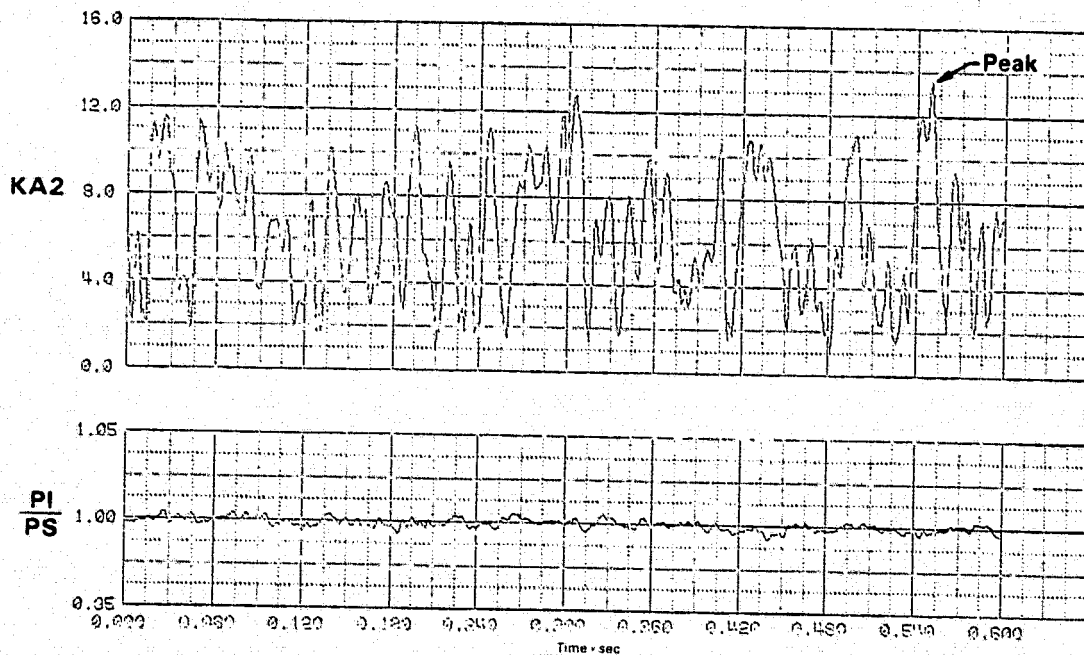
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FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 3 IDENT. 81
THE SEGMENT START TIME WAS AT 2:23:40.091

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 62.8%	CIVV -25.0
PI 41.09 (5.960)	P1/PS 0.997	KTHETA 0.419	KPA2 0.548	BKRA2 13.067	KA2 13.486	KCS 0.432	KOSP 0.452
							D2 0.121

81(p) Time History Plots 100 Hz



PEAK AT TIME = 0.549656 SECONDS

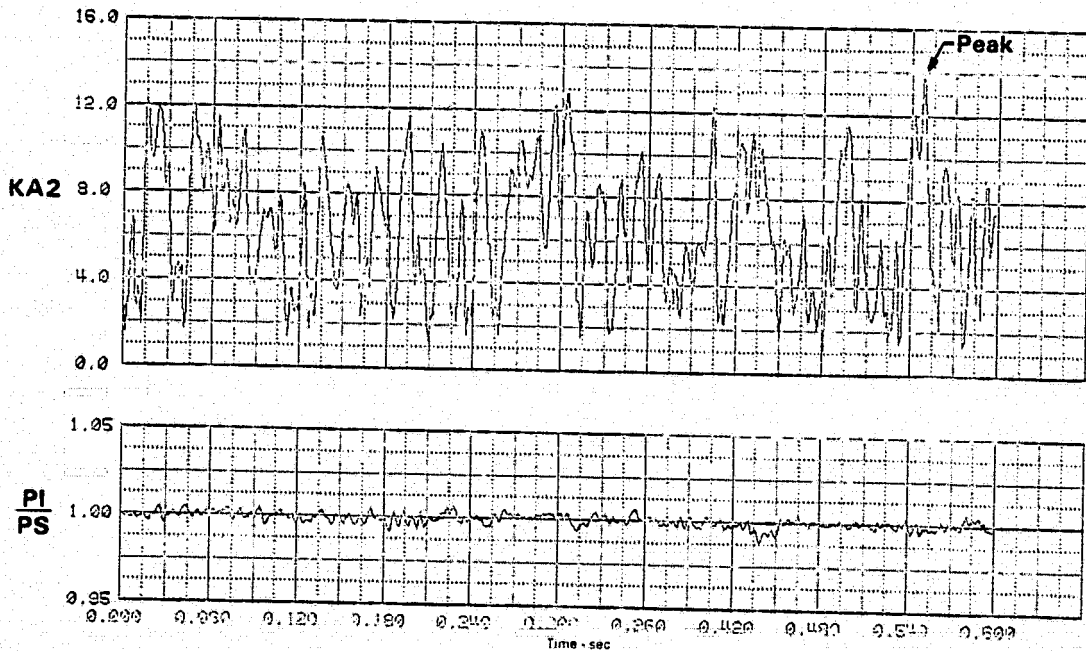
FIGURE G-81 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %

FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 8 IDENT. 81
THE SEGMENT START TIME WAS AT 3:23:40.091

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 62.8%	CIVV -25.0
PI 40.98 (5.943)	PI/PS 0.994	KTHETA 0.425	KRA2 0.565	BKRA2 13.462	KA2 13.827	KC2 0.375	K03P 0.433
							D2 0.127

81(q) Time History Plots 170 Hz



PEAK AT TIME = 0.548574 SECONDS

FIGURE G-81 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %

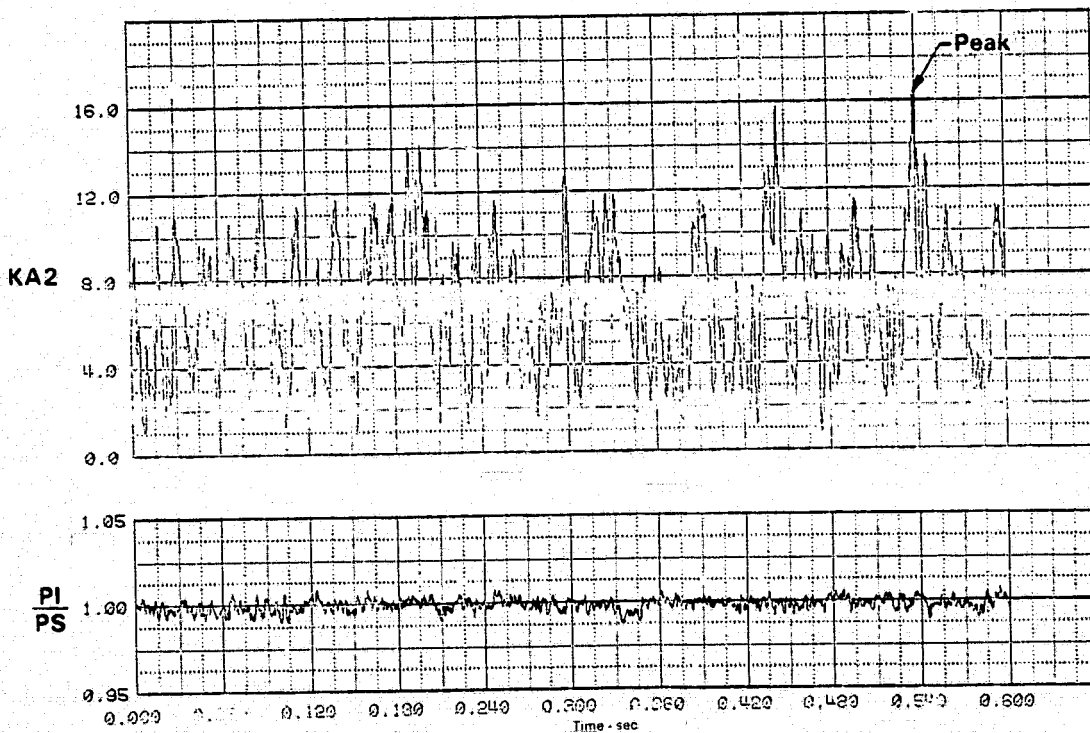
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FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 8 IDENT. 81
THE SEGMENT START TIME WAS AT 3:23:40.195

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 62.8%	CIVV -25.0
PI 41.31 (5.991)	PI/PS 1.002	KTHETA 0.623	KRA2 0.653	BKRA2 15.571	KA2 16.194	KC2 0.637	KOSP 0.707
							D2 0.147

81(r) Time History Plots 500 Hz



PEAK AT TIME = 0.538748 SECONDS

FIGURE G-81 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %

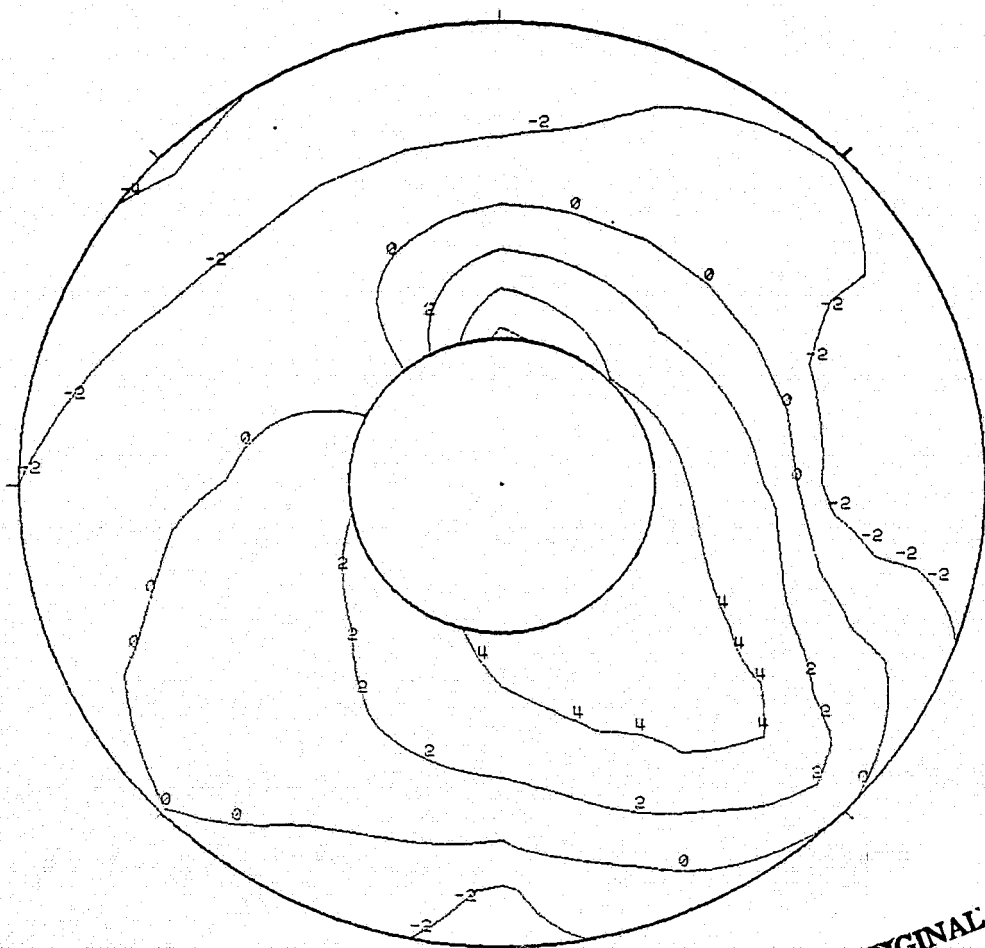
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FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 8 IDENT. 81
THE SEGMENT START TIME WAS AT 3:23:40.091

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 62.8%	C1VV -25.0
PI 41.18 (5.973)	PI/PS 0.999	KTHETA 0.367	KRA2 0.483	BKRA2 11.527	KA2 11.894	KC2 0.324	KOSP 0.399
							D2 0.093

**81(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz**



MEAN FACE PRESSURE = 41.18 kPa (5.973 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.550738 SECONDS

FIGURE G-81 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %

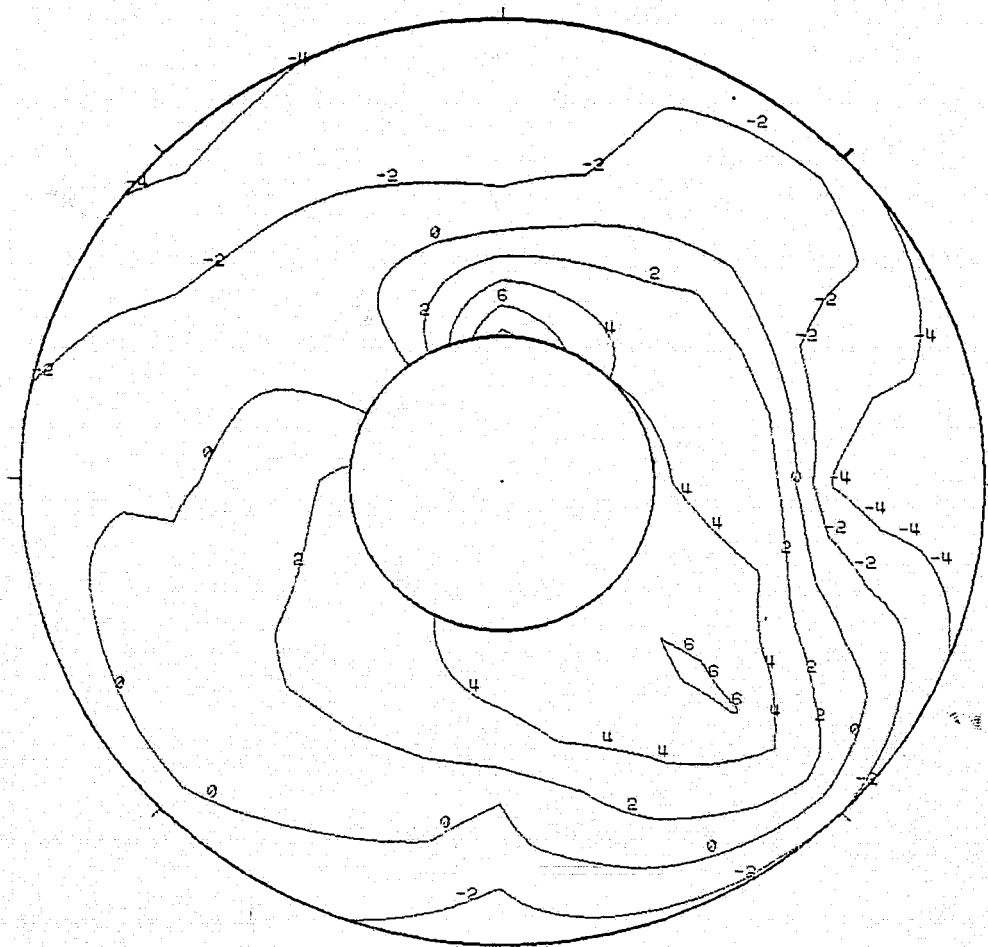
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FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 8 IDENT. 81
THE SEGMENT START TIME WAS AT 3:23:40.091

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 62.8%	CIVV -25.0
PI 41.09 (5.960)	P1/PS 0.997	KTHETA 0.419	KRA2 0.548	BKRA2 13.067	KA2 13.486	KC2 0.402	KOSP 0.452
							D2 0.121

**81(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
100 Hz**



MEAN FACE PRESSURE = 41.09 kPa (5.960 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.549656 SECONDS

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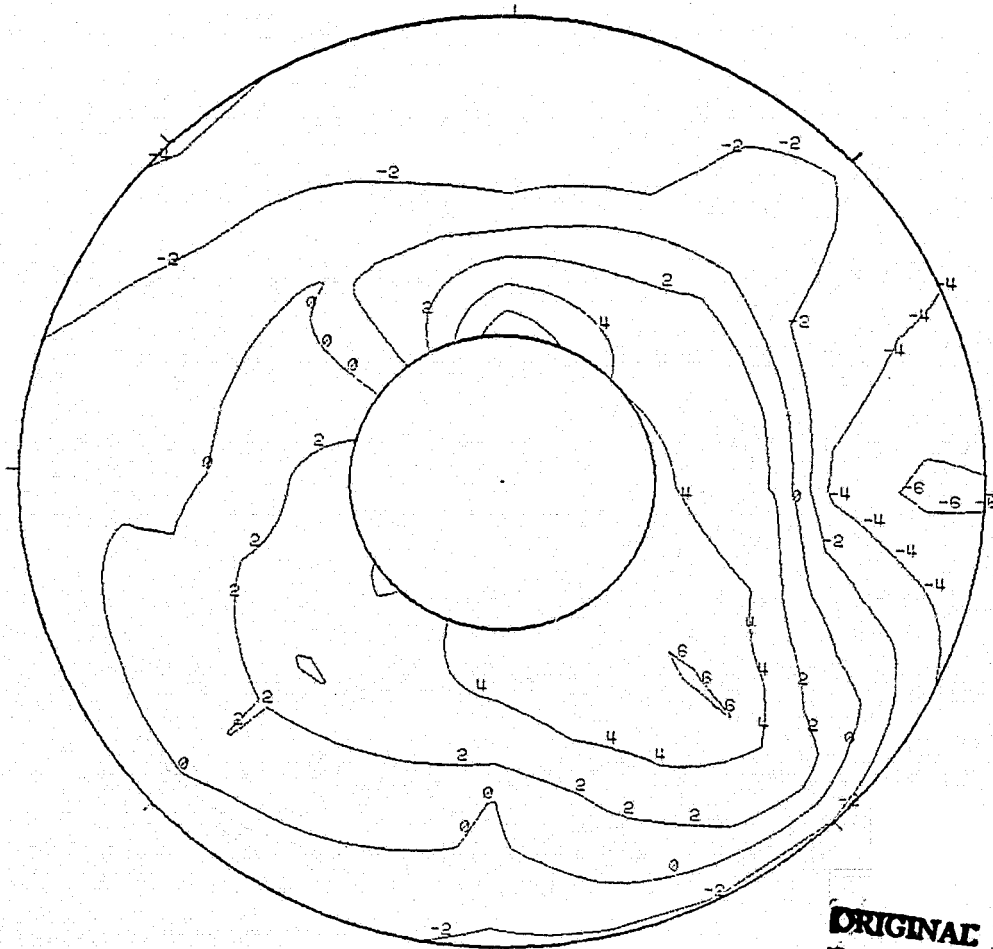
**FIGURE G-81 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %**

FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 9 IDENT. 81
THE SEGMENT START TIME WAS AT 3:23:40.091

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07806 (121.0)	WAT2 62.8%	CIVV -25.0
PI 40.98 (5.943)	PI/PS 0.394	KTHETA 0.425	KRA2 0.565	BKRA2 13.462	KA2 13.887	KC2 0.375	KOSP 0.433
							D2 0.127

81(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz



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MEAN FACE PRESSURE = 40.98 kPa (5.943 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.548574 SECONDS

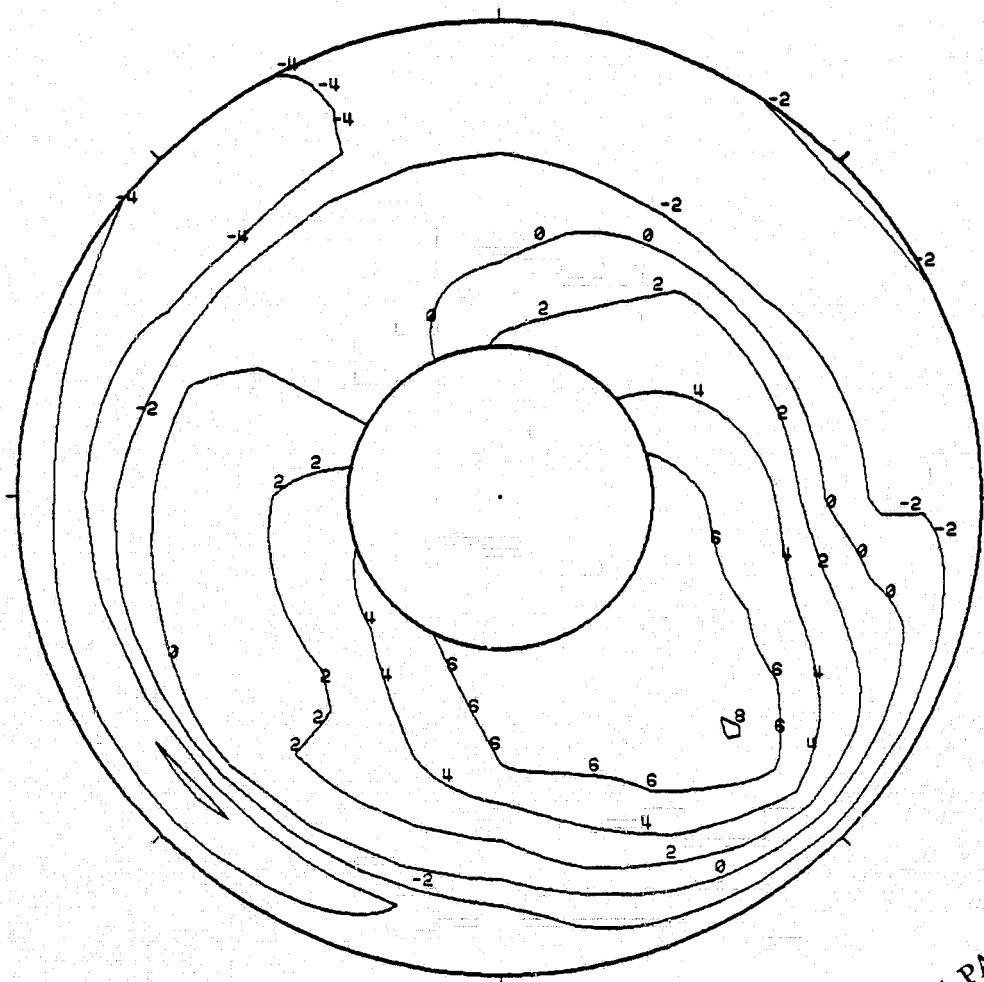
FIGURE G-81 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %

FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 8 IDENT. 81
THE SEGMENT START TIME WAS AT 3:23:40.195

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07806 (121.0)	WAT2 62.8%	CIVV -25.0
P1 41.31 (5.991)	P1/PS 1.002	KTHETA 0.623	KRA2 0.653	BKRA2 15.571	KA2 16.194	KC2 0.637	KOSP 0.707
							D2 0.147

81(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz



MEAN FACE PRESSURE = 41.31 kPa (5.991 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.538748 SECONDS

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FIGURE G-81 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 62.8 %

FSCP - NASA Data Study
 Part/Point - 465/5, Ident 82
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.078(121.0) -25.00

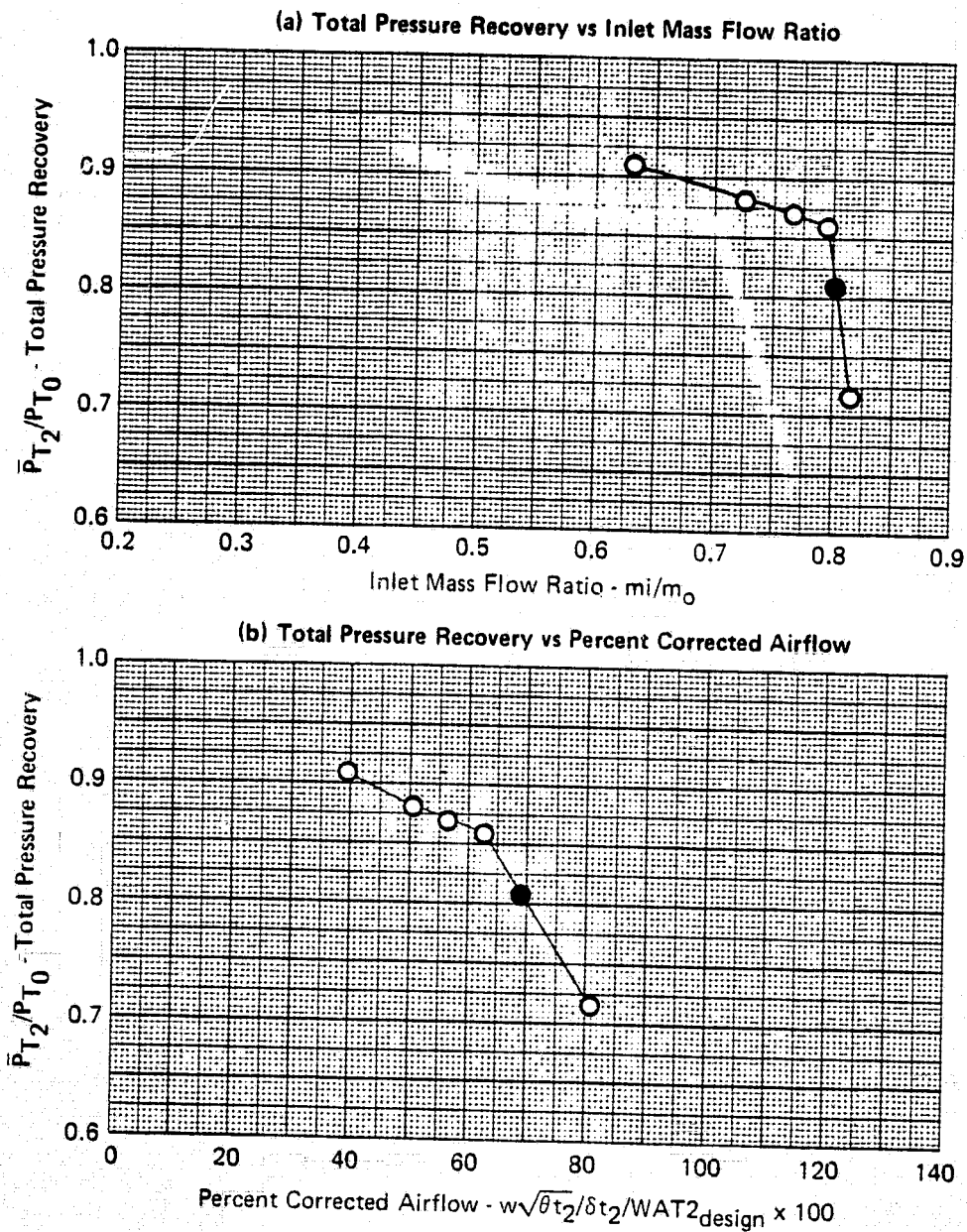
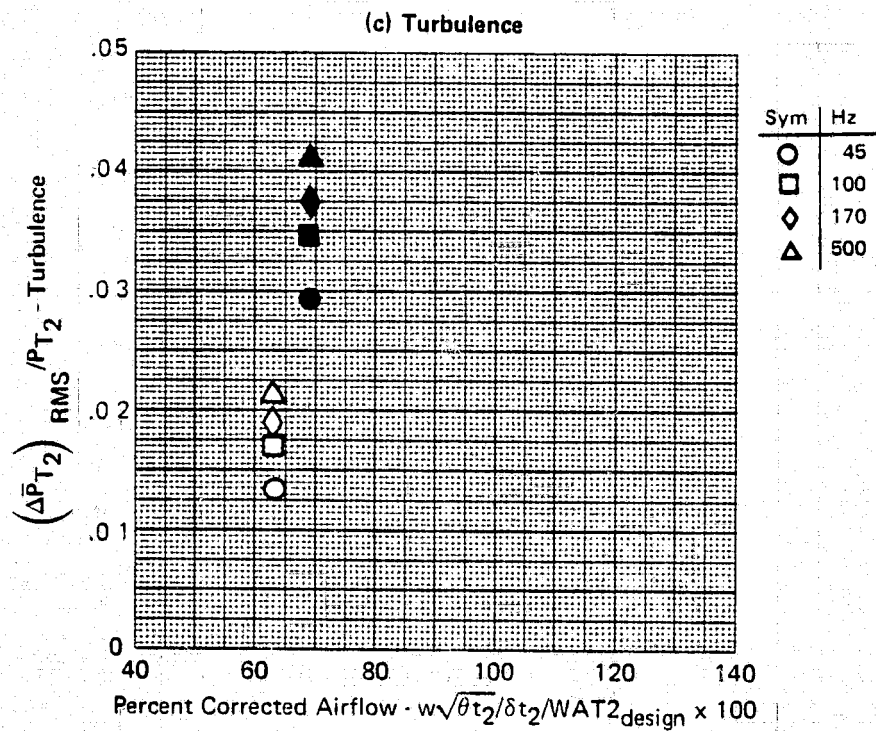


FIGURE G-82
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5, \alpha = 0.0, \beta = 0.0, WAT2 = 68.9 \%$

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FSCP - NASA Data Study
 Part/Point - 465/5, Ident 82
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.078(121.0) -25.00

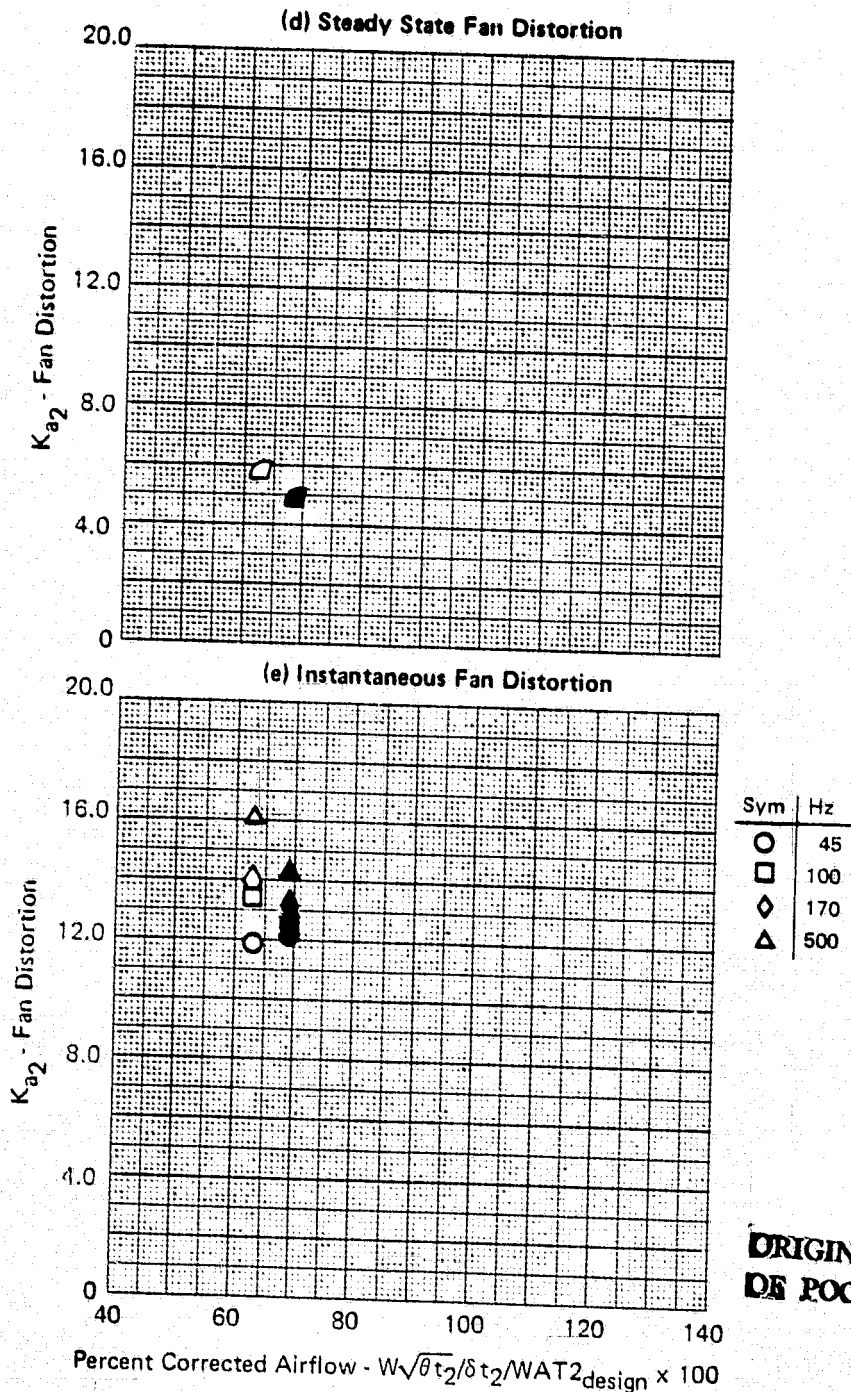


GP77-0658-5

FIGURE G-82 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.9\%$

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FSCP - NASA Data Study
 Part/Point - 465/5, Ident 82
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.078(121.0) -25.00



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FIGURE G-82 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.9\%$

GP77-0658-3

FSCP - NASA Data Study
 Part/Point - 465/5, Ident 82
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.078(121.0) -25.00

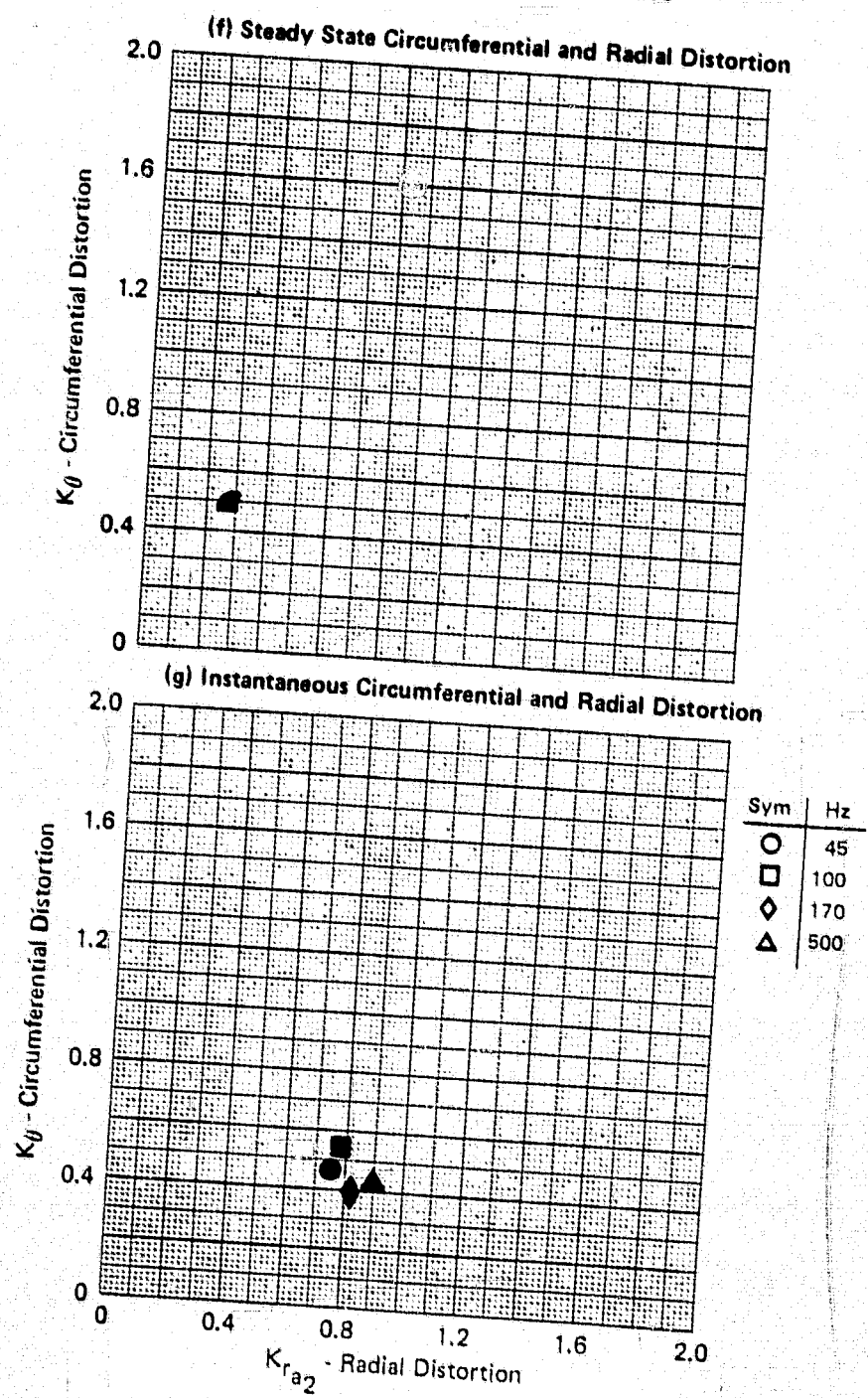
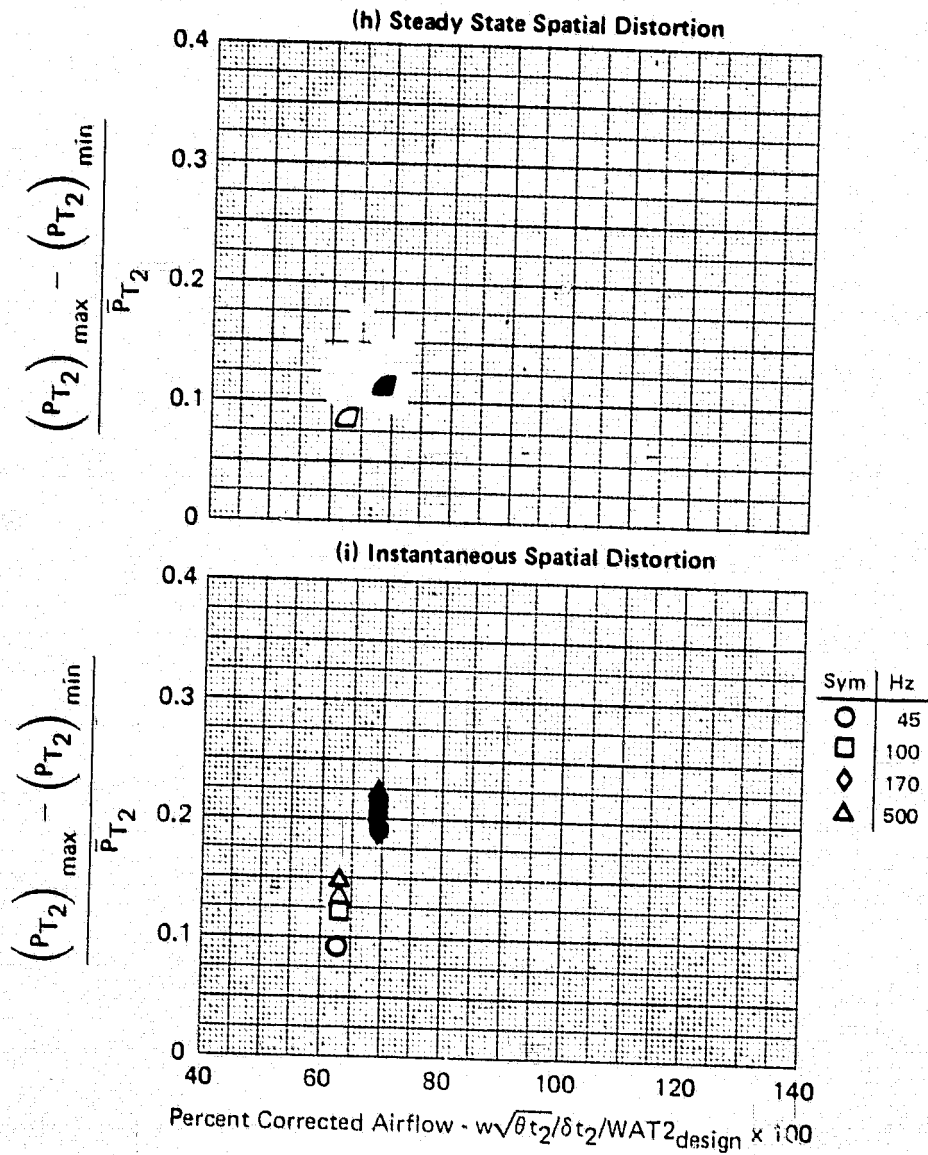


FIGURE G-82 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.9 %

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FSCP - NASA Data Study
 Part/Point - 465/5, Ident 82
 RHO DELTA3 BYPASS CIVV
 -4.0 26.0 0.078(121.0) -25.00



GP77-0658-4

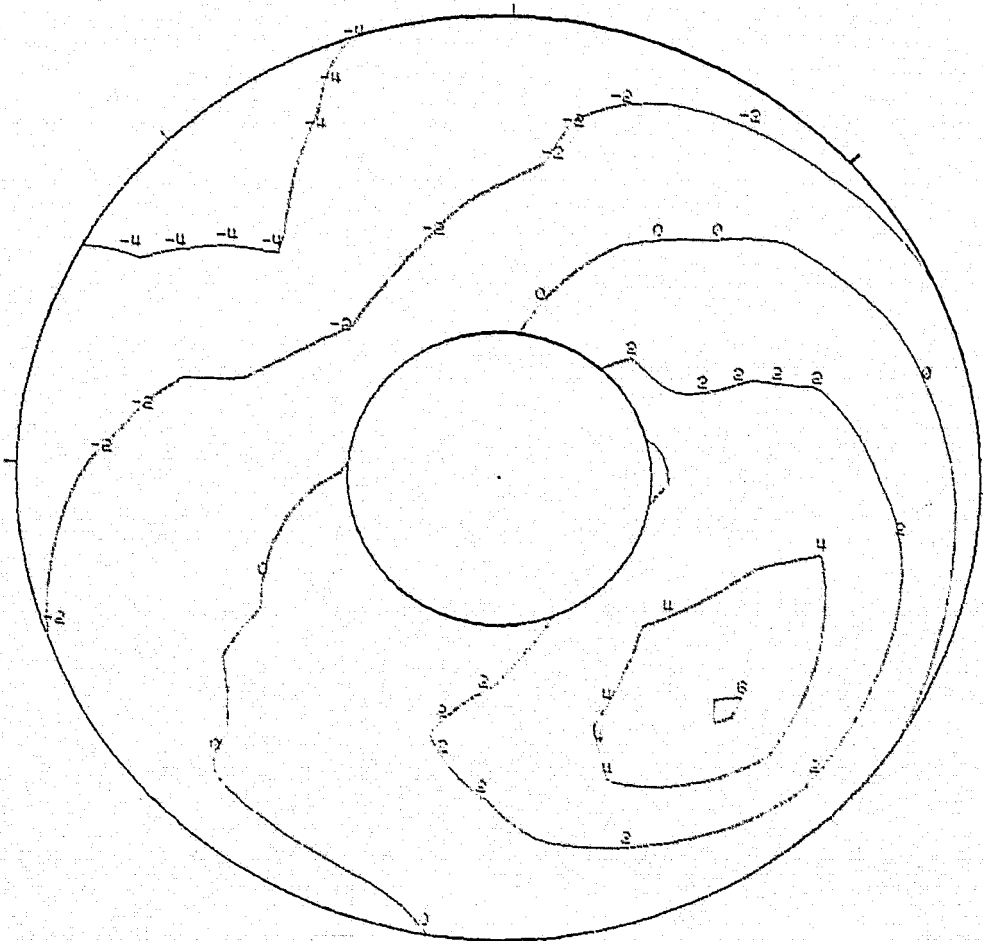
FIGURE G-82 (Continued)
 INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.9\%$

FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 5 IDENT. 82
THE SEGMENT START TIME WAS AT 3:21: 4.091

MACH 2.5	ALPHA 0	BETA 0	PHO -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 68.9%	C1VV -25.0
P1 38.74 (5.619)	P1/PS 1.000	KTHETA 0.499	KPA2 0.290	BKPA2 4.370	KPA2 4.368	KC2 0.451	KESP 0.499
							D2 0.111

82 (I) Steady State Total Pressure Contour



MEAN FACE PRESSURE = 38.74 kPa (5.619 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE.

FIGURE G-82 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.9 %

FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 5 IDENT. 82
THE SEGMENT START TIME WAS AT 3:21: 4.091

MACH
2.5

ALPHA
0

BETA
0

RHO
-1.0

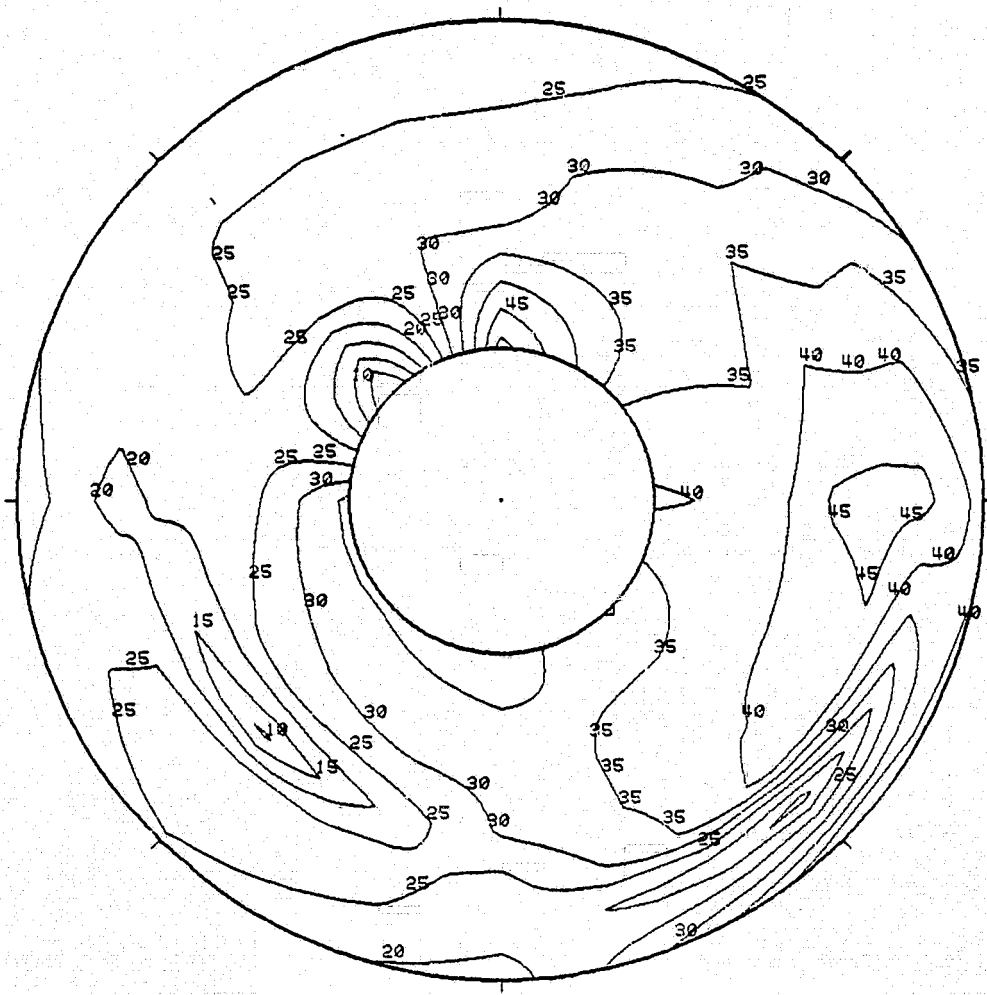
DELTA3
26.0

BYPASS
0.07806 (121.0)

WAT2
68.9%

CIVV
-25.0

82 (k) Turbulence Contour 45 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .02931

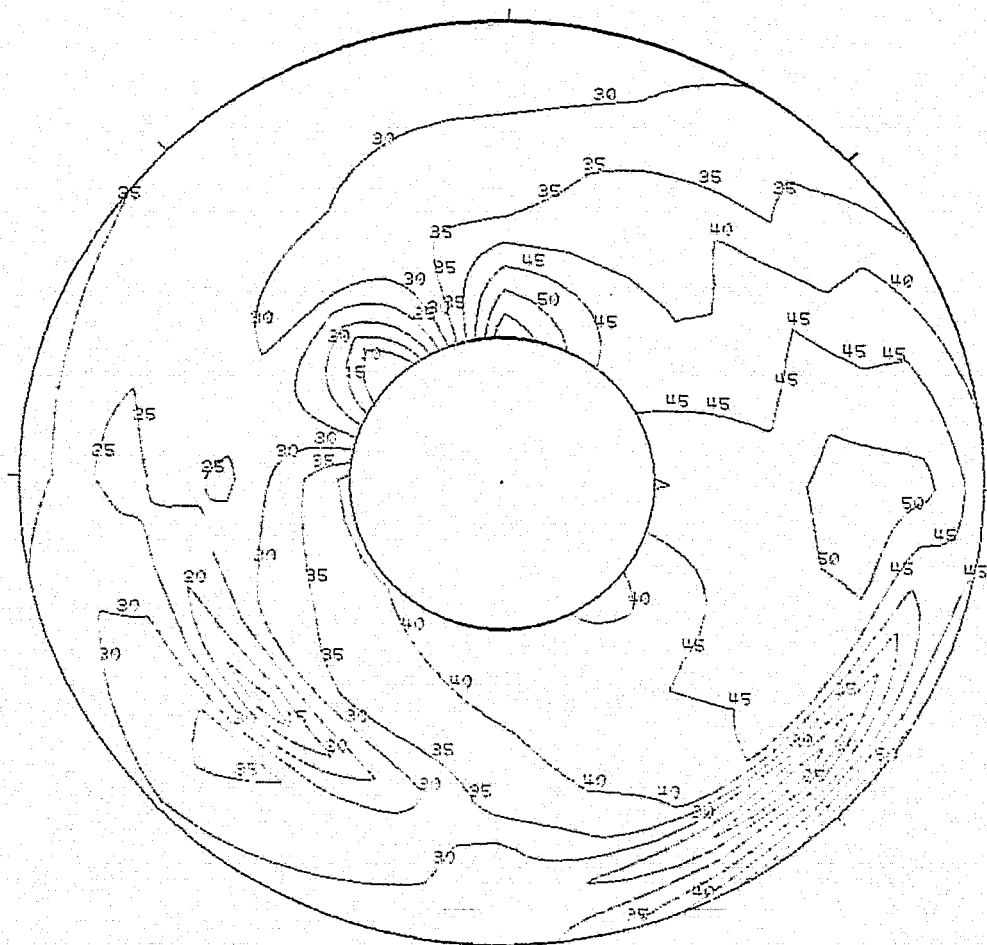
FIGURE G-82 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.9 %

FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 5 IDENT. 82
THE SEGMENT START TIME WAS AT 3:21: 4.092

MACH 2.5	ALPHA 0	BETA 0	PHI -4.0	DELTA3 25.0	BYPASS 0.07806 (121.0)	WAT2 68.9%	CIVV -25.0
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82 (I) Turbulence Contour 100 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .03458

FIGURE G-82 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.9 %

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DATA PART/POINT 465 / 5 IDENT. 82
THE SEGMENT START TIME WAS AT 3:21: 4.091

MACH
2.5

ALPHA
0

BETA
0

PHI
-1.0

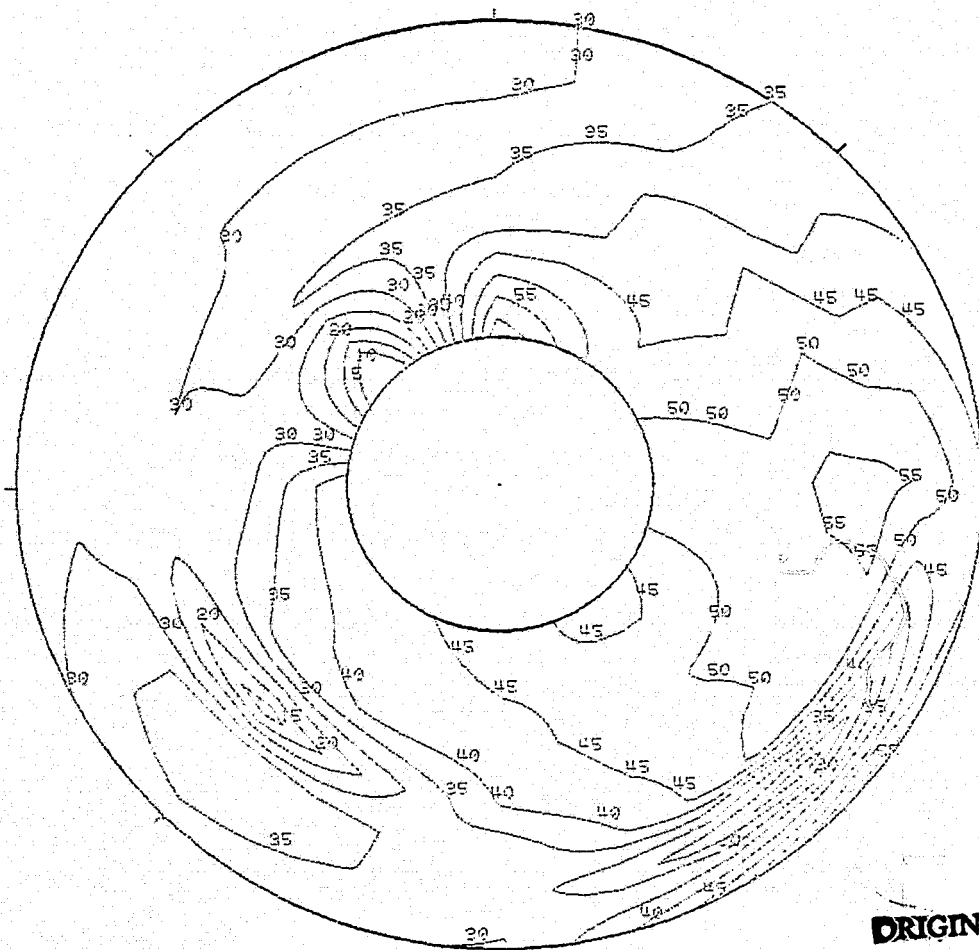
DELTA2
35.0

SWPASS
0.07806 (121.0)

WAT2
68.9%

CINV
-25.0

82 (m) Turbulence Contour 170 Hz



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NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .03754

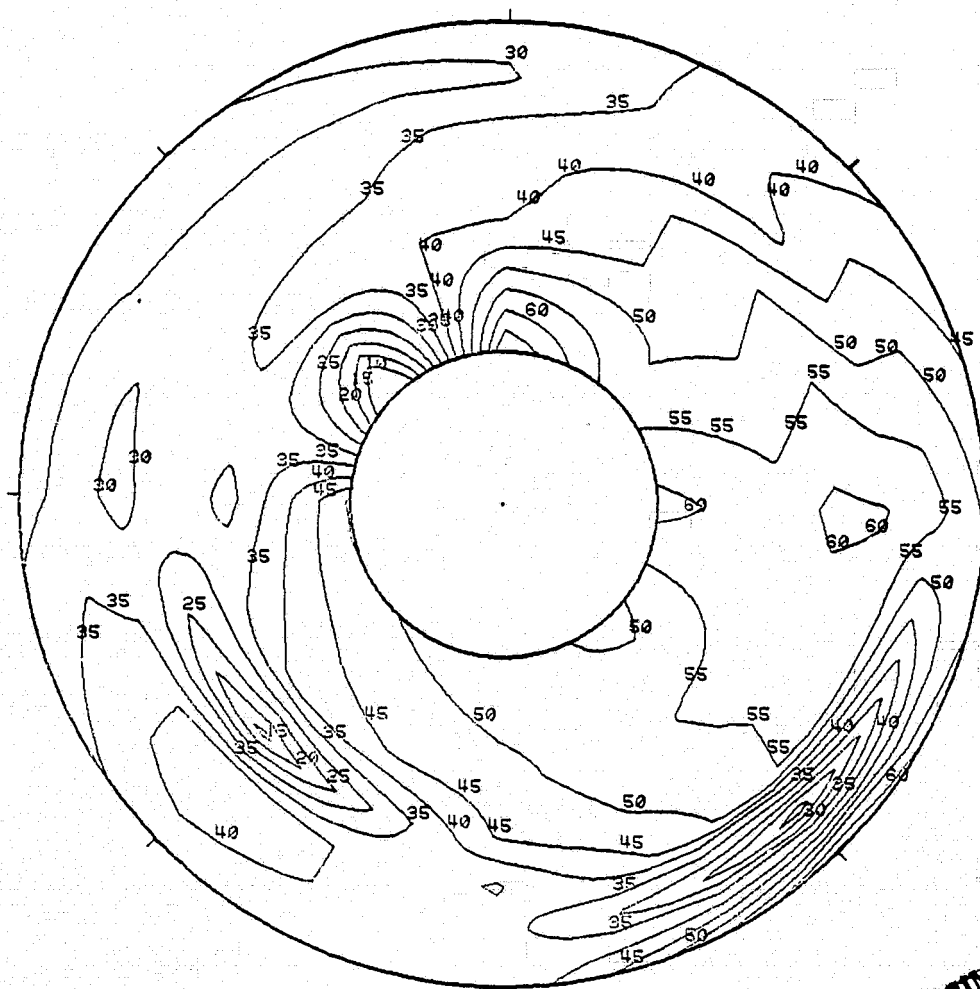
FIGURE G-82 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.9$ %

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DATA PART/POINT 465 / 5 IDENT. 82
THE SEGMENT START TIME WAS AT 2:46: 7.090

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 68.9%	CIVV -25.0
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82(n) Turbulence Contour 500 Hz



NOTE: TURBULENCE PROFILE IN TENTHS OF A PERCENT
AVERAGE TURBULENCE = .04131

FIGURE G-82 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.9 %

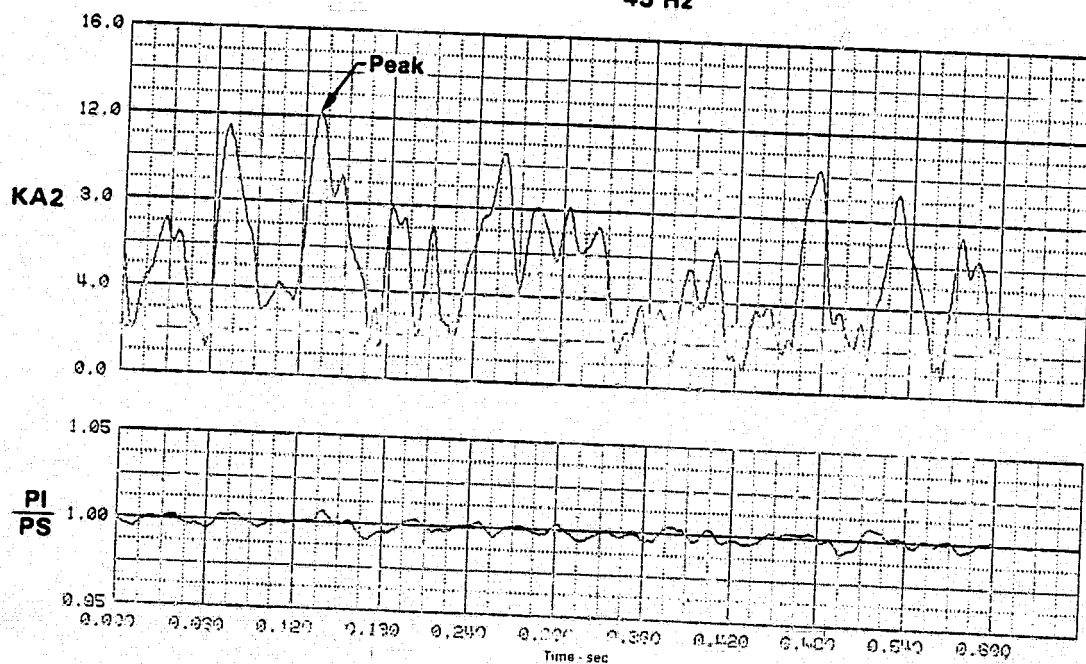
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DATA PART/POINT 465 / 5 IDENT. 82
THE SEGMENT START TIME WAS AT 3:21: 4.091

MACH 2.5	ALPHA 0	BETA 0	PHI -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 68.9%	QIVV -25.0
P1 38.76 (5.622)	P1/PS 1.001	KTHETA 0.463	KAP1 0.749	EKPA2 11.543	KAP2 12.181	KOC 0.536	KOCP 0.429
							O2 0.185

82(o) Time History Plots 45 Hz



PEAK AT TIME = 0.129840 SECONDS

FIGURE G-82 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.9 %

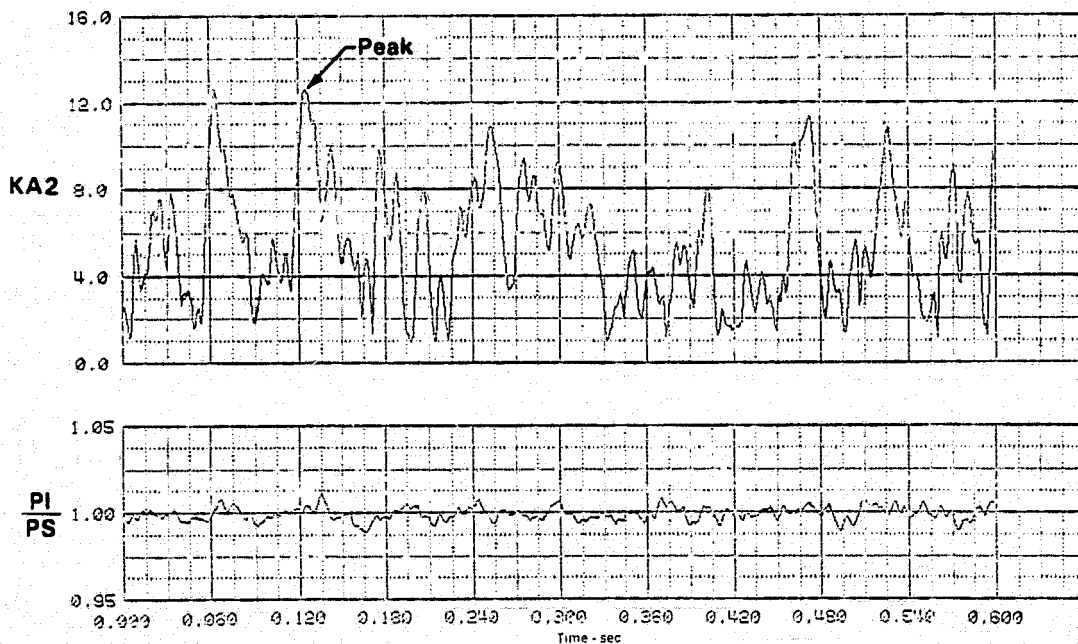
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FSCP - NASA DATA STUDY

DATA PART/POINT 465 / 5 IDENT. 82
THE SEGMENT START TIME WAS AT 3:21: 4.092

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 68.9%	CIWV -25.0
P1 38.91 (5.643)	PI/PS 1.004	KTHETA 0.534	KPA2 0.772	KYPA2 12.071	KPA2 12.605	KQ2 0.723	KQSP 0.514
							D2 0.213

82(p) Time History Plots 100 Hz



PEAK AT TIME = 0.124430 SECONDS

FIGURE G-82 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_o = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.9 %

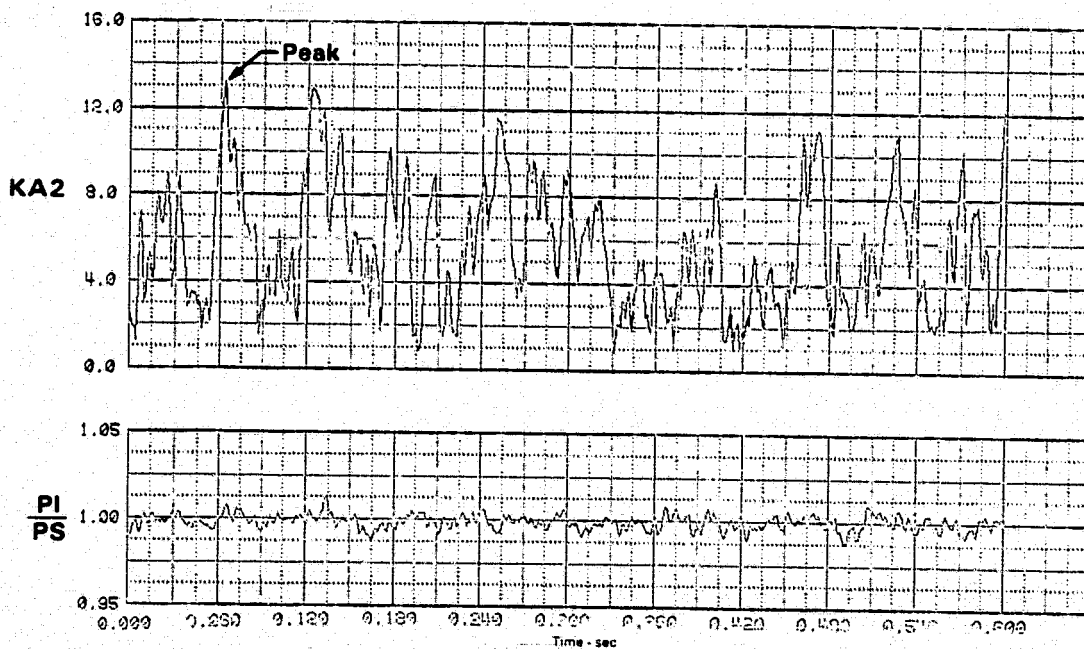
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DATA PART/POINT 465 / 5 IDENT. 82
THE SEGMENT START TIME WAS AT 3:21: 4.091

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07806 (121.0)	WAT2 68.9%	CIVV -25.0
P1 38.80 (5.628)	PI/PS 1.002	KTHETA 0.387	KRA2 0.813	2KRA2 12.805	KA2 13.192	KQ3 0.459	KQ3P 0.391
							D2 0.137

82(q) Time History Plots 170 Hz



PEAK AT TIME = 0.062756 SECONDS

FIGURE G-82 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.9 %

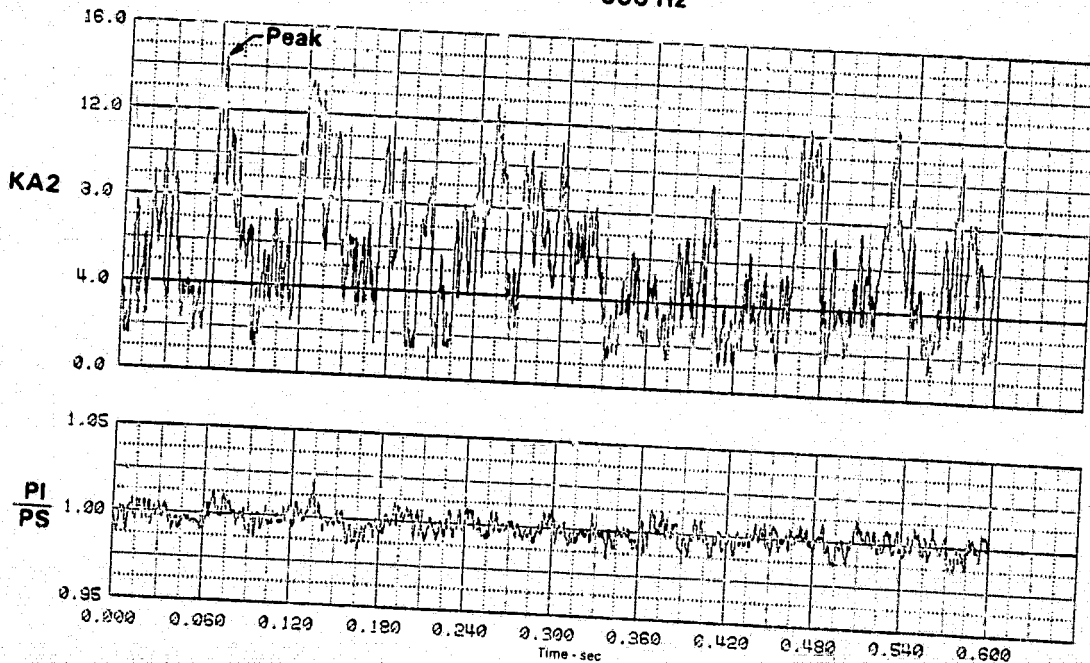
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DATA PART/POINT 465 / 5 IDENT. 82
THE SEGMENT START TIME WAS AT 2:46: 7.090

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 68.9%	CIVV -25.0
PI 38.75 (5.620)	PI/PS 1.000	KTHETA 0.429	KRA2 0.891	BKRA2 13.924	KA2 14.353	KC2 0.501	KOSP 0.413
							D2 0.222

82(r) Time History Plots 500 Hz



PEAK AT TIME = 0.063685 SECONDS

FIGURE G-82 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.9 %

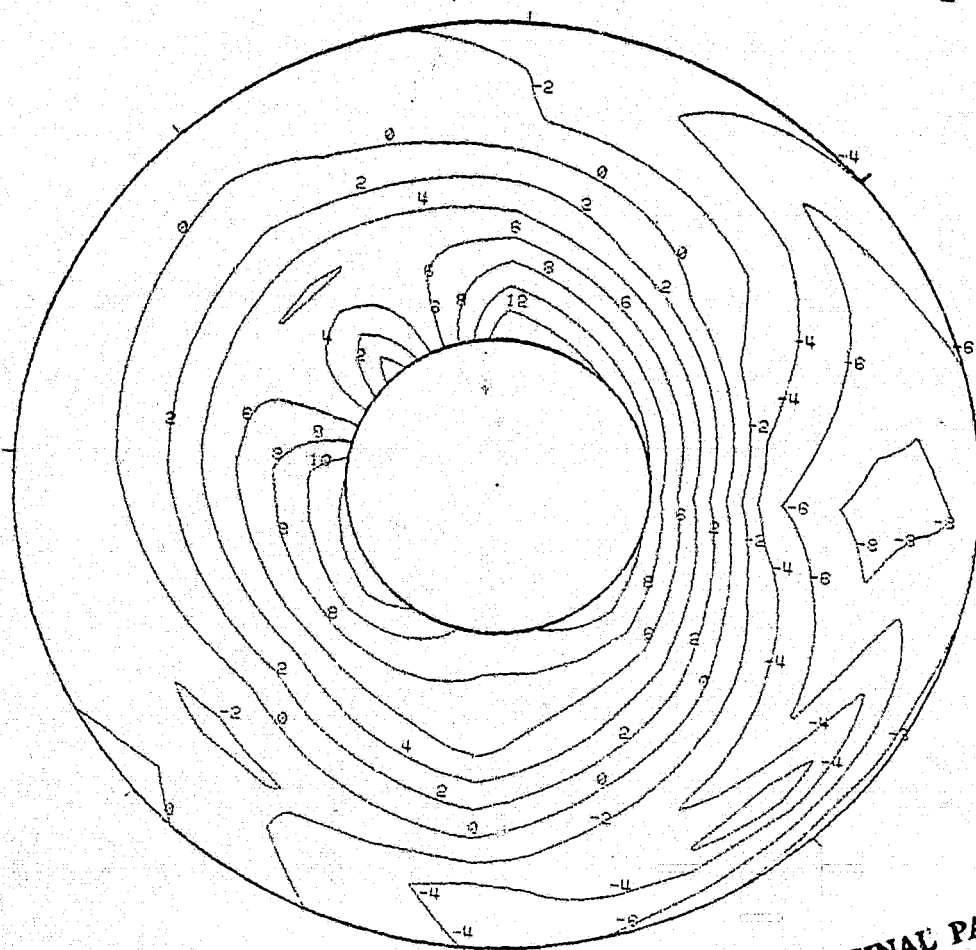
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OF 100

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DATA PART/POINT 465 / 5 IDENT. 82
THE SEGMENT START TIME WAS AT 3:21: 4.091

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07806 (121.0)	WAT2 68.9%	CIVV -25.0
P1 38.76 (5.622)	PI/PS 1.001	KTHETA 0.463	KRA2 0.743	BKRA2 11.698	KA2 12.161	KC2 0.636	KOSP 0.429
							D2 0.195

82(s) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
45 Hz



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MEAN FACE PRESSURE = 38.76 kPa (5.622 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.129840 SECONDS

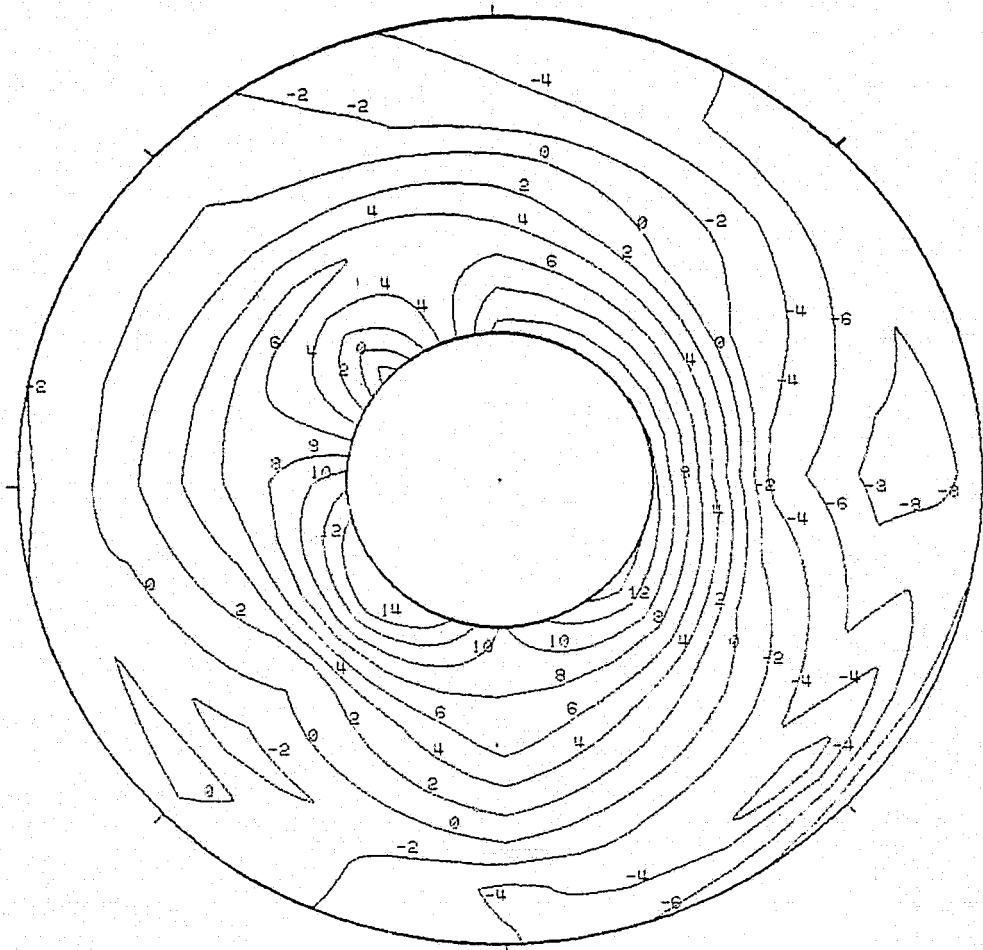
FIGURE G-82 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.9%

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DATA PART/POINT 465 / 5 IDENT. 82
THE SEGMENT START TIME WAS AT 3:21: 4.092

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 26.0	BYPASS 0.07806 (121.0)	WAT2 68.9%	CIVV -25.0
P1 38.91 (5.643)	P'PS 04	KTHETA 0.534	KRA2 0.772	BKRA2 12.071	KA2 12.605	KC2 0.723	KOSP 0.514
							D2 0.213

82(t) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2} 100 Hz



MEAN FACE PRESSURE = 38.91 kPa (5.643 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.124430 SECONDS

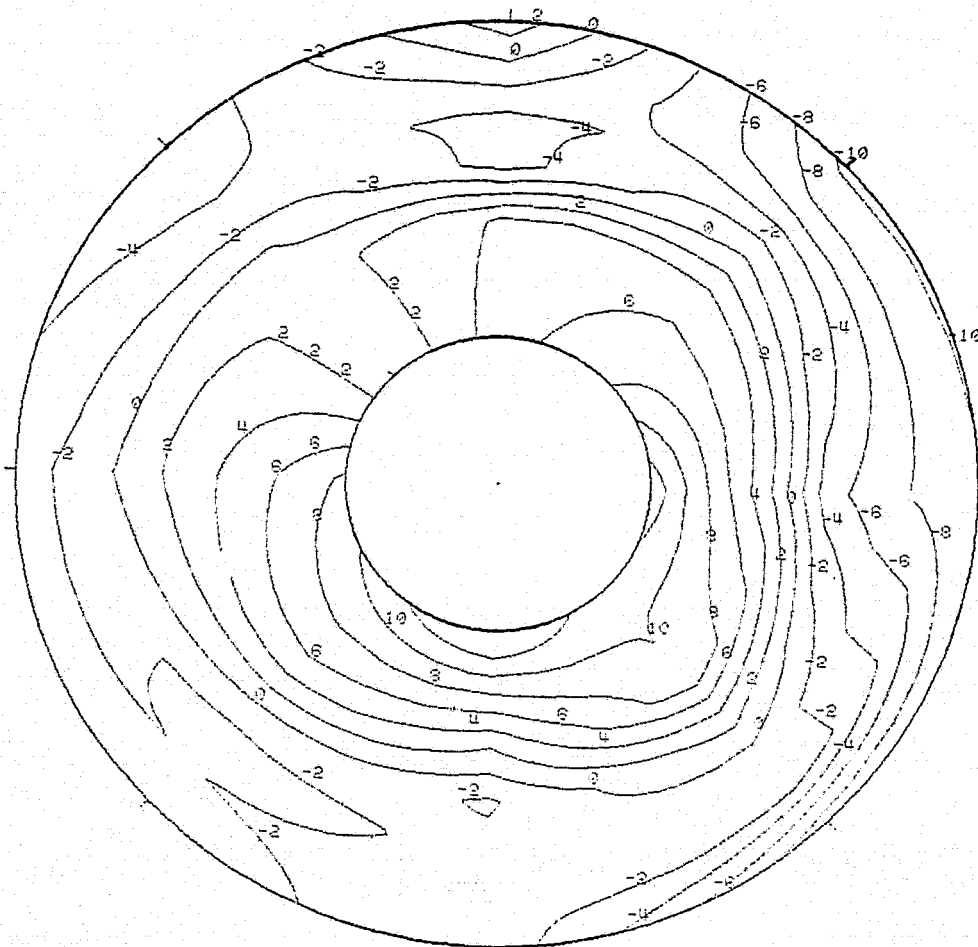
FIGURE G-82 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.9 %

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DATA PART/POINT 465 / 5 IDENT. 02
THE SEGMENT START TIME WAS AT 3:21: 4.091

MACH 2.5	ALPHA 0	BETA 0	RHO -4.0	DELTA3 25.0	BYPASS 0.07806 (121.0)	WAT2 68.9%	CIVV -35.0
PI 38.80 (5.628)	PI/PS 1.002	KTHETA 0.987	KPA2 0.373	BKPA2 12.205	KPA2 12.192	KO2 0.482	KOSP 0.391
							D2 0.137

**82(u) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
170 Hz**



MEAN FACE PRESSURE = 38.80 kPa (5.628 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.062756 SECONDS

FIGURE G-82 (Continued)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, $WAT2 = 68.9\%$

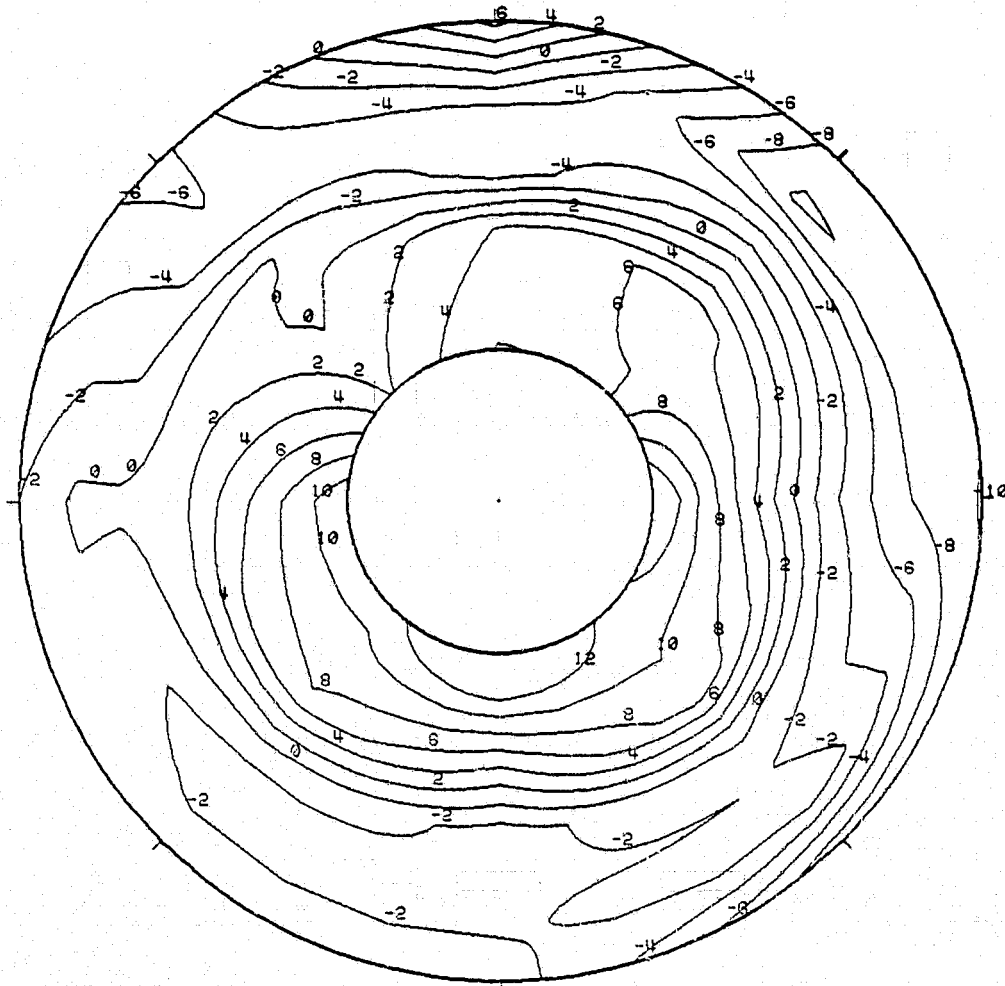
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DATA PART/POINT 465 / 5 IDENT. 82
THE SEGMENT START TIME WAS AT 2:46: 7.090

MACH 2.5 ALPHA 0 BETA 0 RHO -4.0 DELTA3 25.0 BYPASS 0.07806 (121.0) WAT2 68.9% CIVV -25.0

PI 38.75 (5.620) P1/PS 1.000 KTHETA 0.429 KRA2 0.891 BKRA2 13.924 KA2 14.352 KC2 0.581 KOSP 0.413 D2 0.222

82(v) Instantaneous Total Pressure Contour at Peak Instantaneous K_{a2}
500 Hz



MEAN FACE PRESSURE = 38.75 kPa (5.620 PSIA)
NOTE: INLET PROFILE IN TERMS OF PERCENT DEVIATION
FROM MEAN FACE PRESSURE
PEAK AT TIME = 0.063685 SECONDS

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FIGURE G-82 (Concluded)
INLET DISTORTION ANALYSIS PLOTS FOR
 $M_0 = 2.5$, $\alpha = 0.0$, $\beta = 0.0$, WAT2 = 68.9 %